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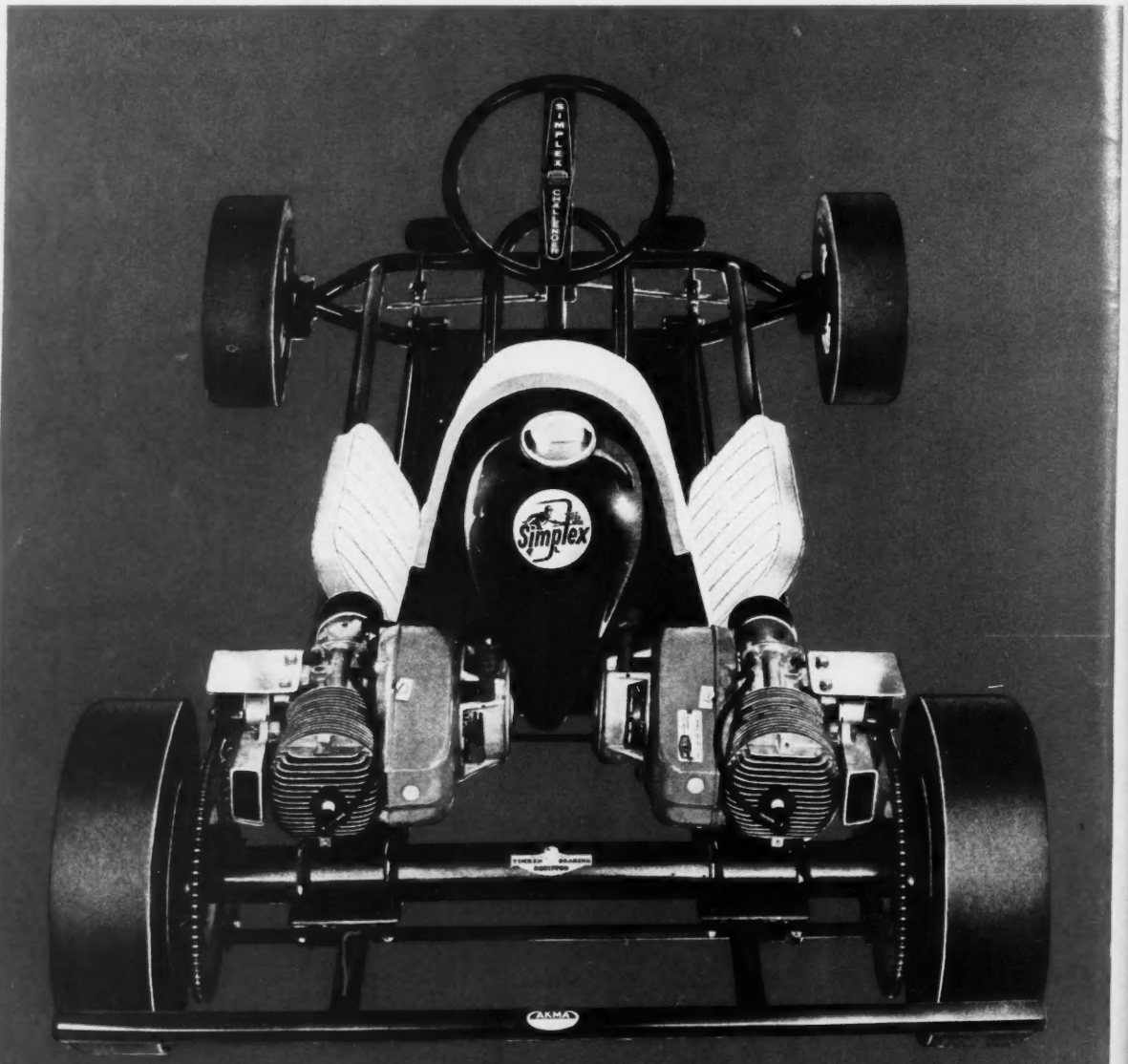

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A prediction of tomorrow's customs is Darryl Starbird's Oakland Roadster Show 'Car of the Future' award winner — PREDICTA. Styled around a totaled '56 Thunderbird, PREDICTA utilizes latest dreamcar and custom features. — *Anscochromes by Pat Brollier*

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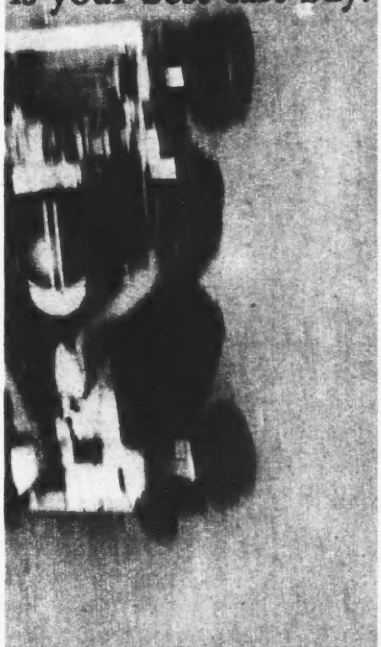

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SPEAKING of the editor

WHEN VIEWING DRAG racing action most of us seem to find more interest and excitement at the starting line. And who can deny the thrills of watching two powerful, roaring rail dragsters coming out of the chute, smoking slicks biting for that precious traction that will send them down the macadam runway that lies ahead, at speeds anywhere from 170 to 190 miles per hour; all this in the mere distance of only thirteen hundred and twenty feet! From the starting line vantage point, needless to say, the low-slung missiles diminish quite rapidly as they make their fleeting journey to the timing lights. But the next time you attend the drags, swing down to the finish line and here you will witness another aspect of drag racing that often is overlooked, or possibly just taken for granted by many of the spectating audience. Just as the cars rapidly diminish in size when leaving the starting line, from this end they reverse the visual thrills by becoming a reality in less than nine seconds, while approaching with incredible speeds. As they flash thru the timing clocks, some nearing the two-hundred mark, you can't help but entertain the thought of the car stopping in the remaining distance of the strip's runway. Not only do you give thought to this fact as you visually follow the car down the strip—but I'm sure the most concerned person at that particular time is the guy behind the wheel. To the driver of a high speed dragster the skill and knowledge of maneuvering the car to a safe stop is equal to any thrills he might experience while 'stabbing and steering it' off the line. In the last few years many barriers of risk have been successfully overcome by technical know-how of hot rod builders and drivers in their quest for higher speeds at the drags. With speeds progressing to such fantastic acceleration performances in a quarter mile distance, the shut-off and braking element of drag racing is rapidly approaching the critical point; especially on drag strips restricted to relatively short shut-off areas for bringing a car traveling 175 mph to a safe stop. There is a signing off point for even the most adequate mechanical brake system when required to stop in restrictive distances. A man who possibly is more aware of this fact than most is Jim Deist, pictured above left. Jim is a parachute engineer and a guy who has come along just at the right time. Experimenting with chute-assisted braking systems for the past two years, Deist has developed a ribbon parachute unit, easily adaptable to all dragsters, that has basically eliminated the threat of inadequate braking on high speed cars. His chute design is not one that stands cars and drivers on their noses, but rather assists the car's normal braking system. For example, a car traveling at 170 mph can be slowed to a safe 30 mph within a distance of sixteen hundred feet. Tommy Ivo (center), a world drag racing record holder, states that since using the chute he wouldn't consider running without it. He says the sensation the driver gets when the chute takes hold is nothing more than you might experience when stopping in an elevator. Tom is just one of many builders and drivers of high speed dragsters that have seen the light with ribbon parachutes as a braking aid. A full report on the new drag racing parachutes can be found on page 22. I don't know whether Jim or the other drag parachute companies involved realize it or not—but it would seem to me, at least for the present they are the only parachute companies that can say to their customers, "If it doesn't work, buddy, bring it back and we'll give you another one!"

—Dick Day

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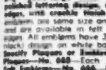

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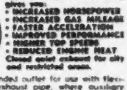

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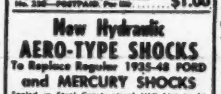

	Year	Pos.	Stk.No.
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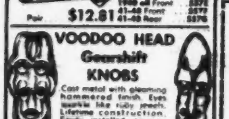

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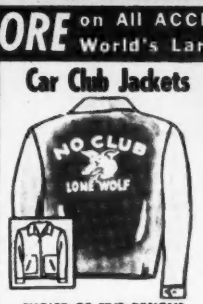

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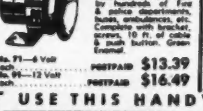

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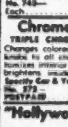
This is a permanent transparent dye that will adhere to lamp bulbs. Not a cellophane coating. Use on dash lights, dome lights, safety lanterns and radio panel lights. Simple to use — applicator bottle and bulb are packed in several bulbs. Available in RED, GREEN, BLUE and VIOLET. State color wanted when ordering.

No. 740—Each $1.00

Chrome Door Lock Knobs



TRIPLE CHROME PLATED

Changes colored door lock knobs to all chrome. Customizes interiors of car and brightens inside of door.

Specify Car & Year.

No. 573—POSTPAID 2 FOR $1.00

"Hollywood" Wolf Whistle

Intake manifold whistle gives the wolf howl. Attaches to any size dog and other attachments to make the intake manifold.

No. 61—POSTPAID, Each $2.95

For all makes of Cars.

WHEN YOU WANT PLENTY OF NOISE—INSTALL A HOLLYWOOD NOISE MAKER MUFFLER

- Shell length only 11 inches long
- Overall length 14" Diameter 5"

THE MUFFLER WITH THE LOUDEST R-O-A-R!

- All Steel Construction with electrically welded seams.
- Universal end caps with bulldogs make this muffler adaptable to any size tailpipe.
- Straight-thru construction with perforated inner core. No Packing—No Baffles.
- Complete with clamps and bolts.

No. 843—Each $3.98

ENGINE & TRANSMISSION ADAPTERS Now at Rock-Bottom Prices

Adapts the LARGER, MORE POWERFUL OHV V8 ENGINES TO FIT TRANSMISSIONS OF CARS LISTED BELOW

Latest Design, Precision machined, guaranteed to fit. Made of heat treated aluminum except where shown.

For FORD 32-48, MERCURY 39-50 TRANSMISSIONS

Adapts the following OHV V8 engines to fit any Ford 32-48, Mercury 39-50 transmission, will also fit Ford 48-52 F3, F6 Truck trans. where indicated by (*).

53-56 BUICK, all
No. 398—Ea. 22.25

49-54 CADILLAC, all
No. 399—Ea. 16.25

49-60 Oldsmobile, all
No. 399—Ea. 16.25

55-60 CHEV. V8, all
No. 400—Ea. 34.95

51-53 Chrysler V8, all with 3½" Pilot Bore
No. 401—Ea. 23.25

No. 402—To fit 37-39 Chev. or
No. 403—To fit 40-54 Chev., only $34.95

Adapts Chev. V8 Engines to Fit 37-54 Chevrolet 6 cylinder with standard trans.

Complete with adapter flange for easy and quick installation.

54-59 Ford, 54-57 Merc. (exc. 352 Eng.)
No. 404—Ea. 28.95

FOR FORD 49-59, MERCURY 51-59 TRANSMISSIONS

Adapts the following OHV V8 engines to fit FORD 51-59, MERCURY 51-59 transmissions.

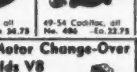
53-56 BUICK, all
No. 408—Ea. 24.75

49-54 Cadillac, all
No. 408—Ea. 22.75

55-60 Chevrolet, all (For use with Hous'g No. ACA3920)
No. 409—Ea. 21.95

49-60 Oldsmobile, all
No. 408—Ea. 22.75

Starter Motor Change-Over Kit for Olds V8



Complete Kit Simplifies Engine Conversion.

This kit solves the starter motor to steering gear clearance problem found in all Buicks and most other chassis when installing the Oldsmobile OHV V8 engines. This starter kit utilizes switching of the starter motor to the opposite side of the engine. Utilizes all original bolt holes — retaining original strength — reduces weight 150%. Cast and machined of aluminum, adapter kit fits all Oldsmobile V8 OHV engines. Various adapters may be used for all transmissions.

(When moving starter to right kit filter must be removed.)

Chamberlain kit furnished complete—housing, pinion plate, gasket, screws and instructions.

No. 408—Each $25.95

FUZZY MIRROR MUFFS

NEWEST COUNTRYWIDE RAGE

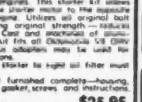
Fits around inside rear view mirror, and trims it with soft, furry fabric.

Here's the latest fad in the nation—dressing up your inside rear view mirror with a soft, fluffy mirror muff! They're cute, they're different, they're sensational—styled to add a distinctive touch to the interior of your car.

Mirror muffs are made of soft, fluffy imitation white fur. One size fits nearly all inside mirrors, and you can't tell them from the hand made models being worked over! Don't delay—be the first in your crowd to have a new, different mirror muff on your car.

No. 642—Each Postpaid $1.00

HOT ROD FENDERS



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For use in Custom Re-Designed Autos by Hot Rod Cyclists and other Module Equipped Cars—Light or Double

Made of 20 gauge steel. Contoured to fit all automobile tires. Universal mounting brackets adapt to standard brake back-plates. Prime finished, ready to paint.

No. 31—Prime Each $9.95

No. 32—Chrome Plated Each $19.95

12 Brand New Car Plaques

New Eye Catching Designs—For the Individual —For Clubs

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No. 329 H — No. 329 K
No. 329 M — No. 329 N
No. 329 Q — No. 329 P
No. 329 R — No. 329 S
No. 329 U — No. 329 T

Ground raised letters & design. Paint baked on and burnished. Leatherette-like backgrounds. Rustproof—Easy to mount. Hawes clip mounts. Large size 5"x9".

All Nos. Each $2.98

For 1952-56 FORD All Models 6 Pc. TAIL LIGHT KIT

Gives That 1956 Ola-Look To 53-56 Fords

Kit consists of 2 lenses, 2 chrome rims, 2 adapter plates. Easily installed in place of present rims without drilling or cutting. Can also be welded or bonded in place without further alterations. Lenses taper in all sides. Adds a lot to body appearance & styling.

No. 481—52-54 | $9.95
No. 486—55-56 | Postpaid
All 6 Thunderbird

AH-OOO-GAH Chromed HORN

Here it is for the sport car enthusiast. Not a vibrator or other substitute but a genuine motor driven horn.

Chrome Plated Bell with Black Wrinkle Painted Mounting Ends 6 or 12 VOLT

No. 60—POSTPAID $12.60

All Chrome Plated Bell and Housing. Horn is protected for outside mounting. State 6 or 12 VOLT

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Quantity	Stock No.	Description	Price

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Undoubtedly the finest wheels available for durability and beauty, the Hands Aluminum or Magnesium Timken Bearing Wheel has become a trademark with the top contenders in the field of karting. Bug Engineering has been using Hands wheels exclusively on all their production models, while Rupp Mfg. Co. uses nothing less than Hands on all competition karts.

Contact your local kart dealer today or send for free color brochure.

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BOLT-ON POWER FOR THE *CORVAIR!*

A complete straight-thru dual exhaust system that completely replaces stock header and muffler. Drastically reduces back-pressure, improving mileage and puts real snap into the Corvair's performance. Fully equalized dual set-up just bolts onto existing connection points. Anyone can install—no welding or fabricating. Deeper, healthier sounding GLASS-PACK mufflers made of longest lasting heavy gauge seamless steel cases on market today!

$34.95 POSTPAID — Complete with equalized head-pipe, gaskets, chrome-tipped mufflers with brackets welded in position.

CORVETTE TAIL PIPE REPLACEMENTS
$7.95 ea. ppd. Specify either left or right and year.

Send Check or M. O. We prepay freight. Calif. resid. add 4% tax. SATISFACTION GUARANTEED!

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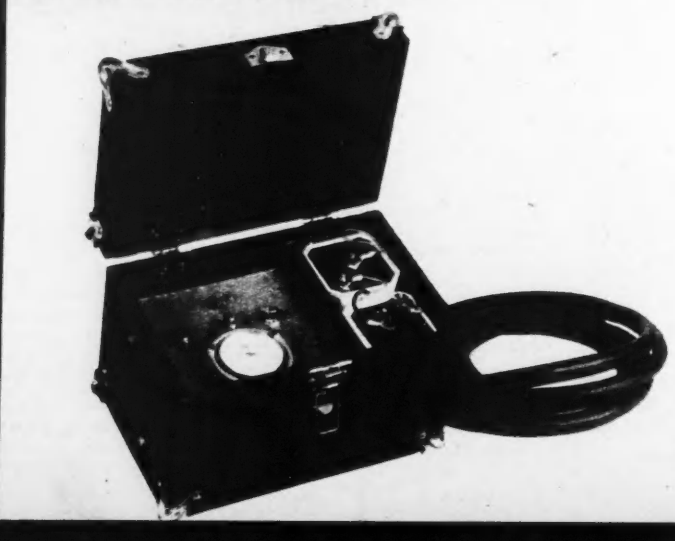
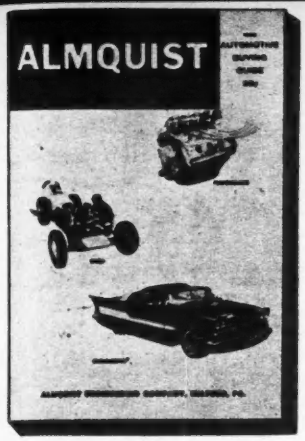
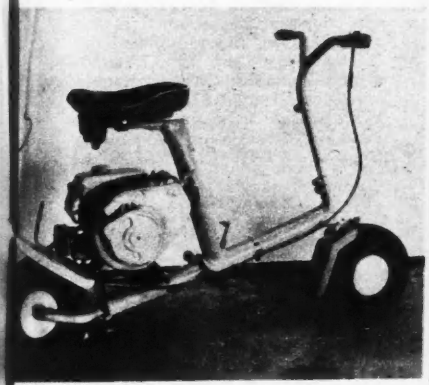




COMPLETE CATALOG

Complete in that accessory parts and equipment for speed, performance or customizing are listed in this 1960 issue of one of the largest auto supply houses' automotive buying guide. Illustrated, 116 page catalog is 25¢, refunded on first order, Almquist Engineering Co., Dept. CC, Milford, Pa.



POP-CYCLE

Don't go to the ice cream store, go to the junk yard. That's where the parts are for this miniature cycle if you follow instructions and plans that are available for only $2 ppd. Write: Joe McBride, Department CC, 2631 Kensington Way, Stockton, California.

MIDGET TRACK TIMER

Times accurately within 1/100th of a second, electrically operated, has a delayed relay, is compact and portable and has water/dust-proof stopwatch. Ideal for kart, g.m. tracks. Price: $90. from Gulling Auto Electric Co., Dept. CC, 1201 Stadium Dr., Indianapolis, Ind.

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SCAT CAT
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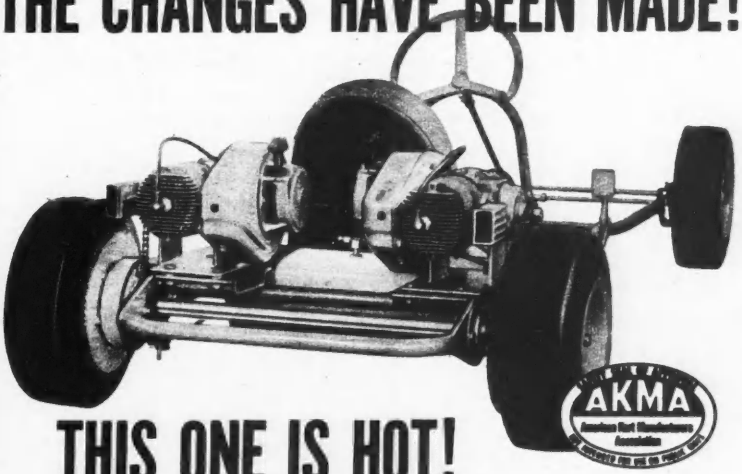
THE CHANGES HAVE BEEN MADE!



THIS ONE IS HOT!

The Dart-Kart engineers and test drivers have completed the job. The new Super "K" Dart-Karts are rolling off the production line and burning up the tracks. Here is a live-axle kart without peer. The "new look" features a shorter frame for better weight distribution—better handling. A wider wheelbase gives you unmatched stability, and all-new internal expanding brake means smooth, quick-action control.

Other high-performance features include: Dart-Kart's exclusive racing frame, magnesium wheels and sprockets, a two-gallon fuel tank to eliminate pit stops, slicks, headers, clutches, sealed precision bearings, and a complete choice of power plants. Also full upholstery with side pads.

MOST HELPFUL KARTING CATALOG YET... GET YOUR COPY NOW!

16 large magazine-size pages illustrates and describes over 20 models. Four pages of the latest and best in accessories. Shows you how to plan and engineer your own winner. Enclose 25¢ to cover postage and handling.

Dart KART BY RUPP

DEALERS: Get complete information on the most profitable kart line in the field. Protected territory, complete literature, ad mats and other selling helps.

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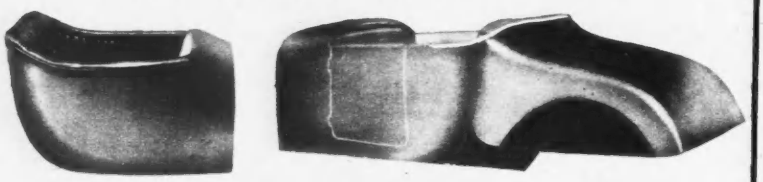
Announcing the NEW GLASS-TEE ROADSTERS

Authentic reproductions of the famous "T" Roadsters are now available in reinforced fibreglass construction, fully primered, ready to mount onto your chassis. T-23 models are buckets only with flush doors. T-27 models include full rear deck, have flush doors. Opening doors available for the T-27 at additional cost.



T-23 Roadster Only $109.50

30% deposit required on c.o.d.'s. Calif. residents include 4% tax. Prices f.o.b. Glendale, California!

T-27 Roadster Only $124.50

Send 25¢ for information

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TOP PERFORMANCE • BUILT-IN SAFETY

Indianapolis-type chassis

Full torsion suspension

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SEND FOR FREE illustrated brochure, prices and details. Select dealer Franchises still available.

WE'VE HAD IT!!

(That part you needed was here all the time!) You will find our stock of Kart parts & accessories is the most complete coverage available.

Fuel hose — clear or clear red, per ft.— 20¢
Gas tanks — 15 types to choose from*
Dual outlet shutoff valve — $1.60
Quarter turn & push-pull shutoff**
"Y" and Nipple fittings for fuel hose*
Ball check valve with nipple fitting — $1.25
Diaphram fuel pumps — 5 types
Pressure pump and gauge set — $11.95
Deluxe aluminum pressure pump — $10.75
No-spill gas caps — 95¢
2½ gal. mix & pour fuel can — $3.00
Adel clamps — 20¢
Clamps for cable housing and hose — 10¢

Del Lorto carburetor — the ultimate in performance — $17.50
Steel manifold stub for Del Lorto — $3.75
Adjustable main jet for Del Lorto — $3.95
Modified diaphram carburetors*
Amal and Tillotson carburetors*
Braided, flexible steel control cable & housing*
Brass arm w/swivel for carb. shaft — 90¢
Speed jet adjuster — remote mounting, 1 ft. from carb.— $5.95
Swivel pin & cable stop for throttle wire — 25¢
Carburetor parts for all makes*
Junction box — for throttle cables on dual engines — $3.50
Foot-shaped aluminum control pedal — spring loaded — $5.50
Steel pedal — spring loaded, complete with cable — $3.95

*Check prices on these and the hundreds of additional items shown in our constantly expanding 1960 catalog.

Catalog price — $1.00, includes postage, handling and refund offer.

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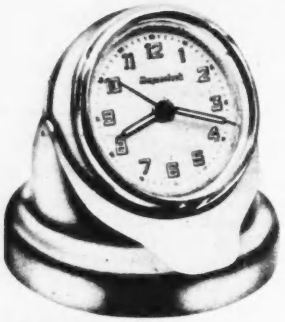


DASH CLOCK

This swivel-based 30-hour or 8-day auto clock is attached to dash with strong magnet. Alarms are available. Colors: Silver, gold, red, blue or green; luminous dial; Guaranteed movement. Prices: $7.95 to $19.95. Write: Glass Laboratories, Department CC, 863-65th Street, Brooklyn 20, N.Y.

MODIFYING THE CONNIE

Reprinted from CAR CRAFT Magazine this book includes chapters on the Novice, Stock, Modified, Open Gas, and Open Fuel classes and National Rules and Specifications. 34 pages. $1.50. Continental Motors Corp., Industrial Air Cooled Engine Division, 12800-CC Kercheval, Detroit 15, Mich.

GLASS-TEE ROADSTERS

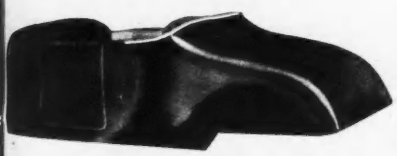
Reinforced fiberglass construction with flush doors, primered and ready to mount on your chassis. Two models available: 'T-27'—$124.50; 'T-23'—$109.50. 25¢ for additional information. Write: Custom Associates, Dept. CC, 4585 Fountain Ave., Hollywood 29, Calif.

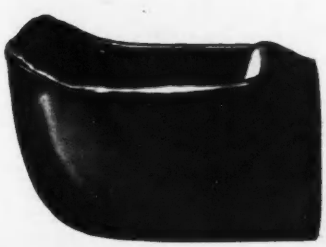
GKCA RACING RULES

Outlining all classes and rules and regulations for competition, the new Competition Regulations manual is now available. Included are membership blank, club info, etc. 50¢. Write: Go Kart Club of America, Dept CC, P.O. Box 808, Azusa, Calif.

HONDA MOTORCYCLES

A complete range of cycles from 125cc, 150cc, 250cc, 305cc to 500cc engine sizes, all top quality OHC twins at amazingly low prices. Expertly made bikes, write: American Honda Motor Co., Inc., Department CC, 4077 W. Pico Blvd., Los Angeles 19, Calif.





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$490.00 (Std. Model)

Brand new ¼ midget from East Coast! A winner in speed and looks.

THE ORBIT SEVEN

COMES COMPLETE WITH ALL THE FEATURES SHOWN (MANY OF WHICH ARE "OPTIONAL EXTRAS" ON OTHER CARS) FOR THE LOW PRICE OF $490.00 F.O.B. STRATFORD, CONN.

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FEATURING:

SPECIAL Heavy-Duty Continental AU7R Engine with Forged Rod. All Welded Channel Frame. Husky Chrome Roll Bar. Atomic Welded and Chromed Nerfs and Bumpers. All Ball Joint Adjustable Front Suspension and Steering. Twin Air Scoops for Efficient Cooling. Naughahyde Upholstery. All Aluminum Parts Buffed to a High Polish. Safety Belt. Available with either direct or rack and pinion steering.

Now available at all Montgomery-Ward Stores

THE ORBIT MIDGET MFG. CO. 400 Surf Ave., Dept. CC-8 Stratford, Conn.

THERE'S LASTING "GO" IN THE GO-CART WITH CONTINENTAL 4-CYCLE POWER

MODEL AU75 RACING ENGINE

NO TWO WAYS ABOUT IT—

There has to be a compromise somewhere when an engine's built down to a price, and usually it's on the score of service-free long life. Experience proves that die-castings and other economy-inspired expedients simply can't compare with rugged cast iron in the ability to take it and come back for more. More and more owners are learning, by switching to Continental, that there's more lasting GO in a go-cart with Continental power. Specify Continental in the cart you buy, or if it's too late for that, the sooner you switch, the more fun you'll have, and the more money you'll save.

WHAT PRICE *PRICE?*

Price is a fair enough yardstick when all other factors are equal, but with engines, it's especially important to make sure that they ARE. Erratic performance, untimely breakdowns, and excessive repairs are a mighty poor buy at any figure. In an engine-building history that goes back pretty close to 60 years, Continental Motors has never been known to compromise quality for price.

BUILD YOUR OWN QUARTER MIDGET RACER

Complete plans now ready. Send $1.50 check or money order—no cash—to Continental Motors Corporation, Dept. D., 12800 Kercheval, Detroit 15, Michigan.

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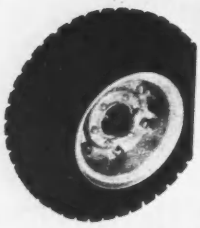
CONTINENTAL MOTORS — Power for Industry the Nation — AMERICA'S STANDARD

Midget Racing WHEELS



4" - 5" and 6" Standard and Super Widths. All hub lengths, all bearings from ½" to 1" Bore. Also, OFFSET HUBS for Sprockets or Pulleys.

All Wheels are STEEL, BOLTED construction and cadmium plated.

HIGH SPEED TIMKEN TAPERED ROLLER BEARINGS

¾" and 1" Bore. In 10", 12" and 14" O.D. Also complete line of industrial wheels.

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KUSTOM CAR PHOTO KIT
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BARRIS KUSTOM CITY

LETTERS

'THERE'S ONE IN EVERY CROWD'

Dear Sir:

Your latest copies of Car Craft (April and May) seem to deal a lot with "go karts". Why? My friends and I think you should just turn the book over to "go karts" and start a new book for cars (big ones). Your best copy in a long time was your December issue. It deals with cars, not those little pint-sized four wheel tricycles with lawn-mower engines.

I don't have a subscription to your magazine but I buy every one I can afford. I sure hope you do something about the "go karts".

—Nick Nichols
Buena Park, Calif.

We have. Look for KART Magazine on your stands. We bet your opinion would change if you ever drove a good kart.— Ed.

SOUTHERN ACCENT

Dear Sir:

Enclosed are a few pictures of my '55 Ford convertible. It is painted '59 Plymouth Flame Red. The car has been dropped 3½ inches in front

and rear. Full length lakes plugs, '57 Dodge Lancers, Merc Turnpike Cruiser skirts, '54 Chevy grille are added. The hood and trunk have been dechromed. The interior is black and white leather.

I would like very much to see my car in your magazine for it is tops.

—Paul Gray, Jr.
Mobile, Ala.

MODEL OUTLAW

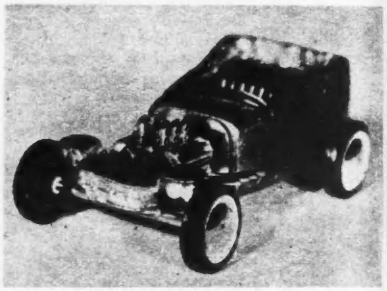
Dear Sir:

I'm enclosing a picture of a '32 Ford AMT 3-in-1 kit, which I tried to make look like the Outlaw. I spotted it in your January 1960 Car Craft.

I used plastic wood to mold the back and front ends. I used a '59 Chevy grille, '59 Corvette headlights and taillights, and Corvette wheels. I also put an aluminum firewall in it. The engine is a Chrysler with six carbs.

The color I chose was Copper enamel, under which I put six coats of plain finger nail polish.

By the time you receive this letter I hope to have finished my model Outlaw, which I have already spent 4 weeks on.



I hope my letter deserves a space in your letter department which, by the way, I enjoy the most about your magazine. Keep up the great work. Take it easy on the "kiddie karts".

—Ronald D. Wolledge
Ovid, N.Y.

We're sure the finished Outlaw will be fine, judging from your start. Glad you like this section. We will take it easy in Car Craft as far as karts are concerned. We're starting a new Petersen Publication devoted exclusively to this rapidly growing field of karts. It'll be on the newsstands soon and the title (in case you can't guess) is KART.— Ed.

THIS TIME A DEUCE

Dear Sir:

I have been a Car Craft fan for two years now. In these two years I have seen various miniature customs and roadsters. Here are two pictures of my miniature creation.

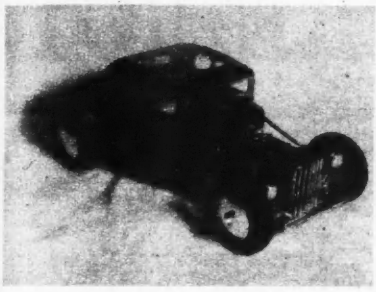
This is a '32 Ford 5-window coupe built from a Monogram kit. It has a channeled body and clear top so interior details are visible. Cycle fenders are placed over slicks aft. Radical front rake is attributed to dropped axle and cut springs.

Power, if it would run, is supplied by an Olds engine with dual 4-barrel carbs. If you look close you may be able to see spark plug wires which were my own idea.

Protection is provided by nerf bars, plain straight bar forward and

a special arrangement containing dual exhausts and taillights.

Inside is rolled and pleated with chrome wheel and steering column. I have also added a chrome roll bar for protection.



The finish is a brown maroon, my own concoction, this is topped off with white pin stripes and chrome discs with double bar spinners on front.

I hope you feel my miniature roadster is worthy of a place in your fine magazine.

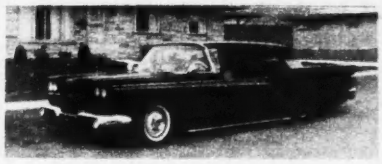
— Jim Vinskus
Brockton, Mass.

It is.— Ed.

BLACK BEAUTY

Dear Sir:

Enclosed are photos of my '59 Ford Galaxie. I would like very much to see it appear in your fine magazine which I buy every month. It is lowered 2 inches in front using rewelded spindles and 6 inches in back using blocks and dearching the springs which resulted in rewelding of the



driveshaft tunnel. Features are: electric doors and trunk, molded grille shell with tubular bar grille, dual Appleton spotlights, full length lakes pipes, '57 Merc Cruiser skirts, '59 Dodge spinners and '60 Buick taillights.

Paint is 15 coats of hand rubbed black lacquer. All work and painting was done by Weida Brothers Body Shop of Elizabethville, Pa.

I am a member of the Modifiers, Elizabethville, Pa.

— Allen Romberger
Elizabethville, Pennsylvania

Only one thing better than a subscriber and that's a participating buyer.— Ed.

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TOPS IN THE ECONOMY DIVISION TOO

The same experience in research, design and testing and strict adherence to only top quality production that characterizes Isky super hot cams is also employed in the production of cams for the economy cars. Here, once again, is another case history.

John Del Pozo of South Gate, Calif., is typical of the average racing enthusiast who compromised his love for the sport with a modest budget — yet with the 'IE' FORMULA came up with a winning combination. His '56, 6 cyl., stock, unblown Chevy, equipped only with an Isky Roller Cam and Kit holds record at Long Beach 106.23 mph (13.52 ET). It runs consistently in the 103 plus bracket with 13.50 sec. ET's. Car is driven to and from work and is even driven at drags by his equally enthusiastic wife.

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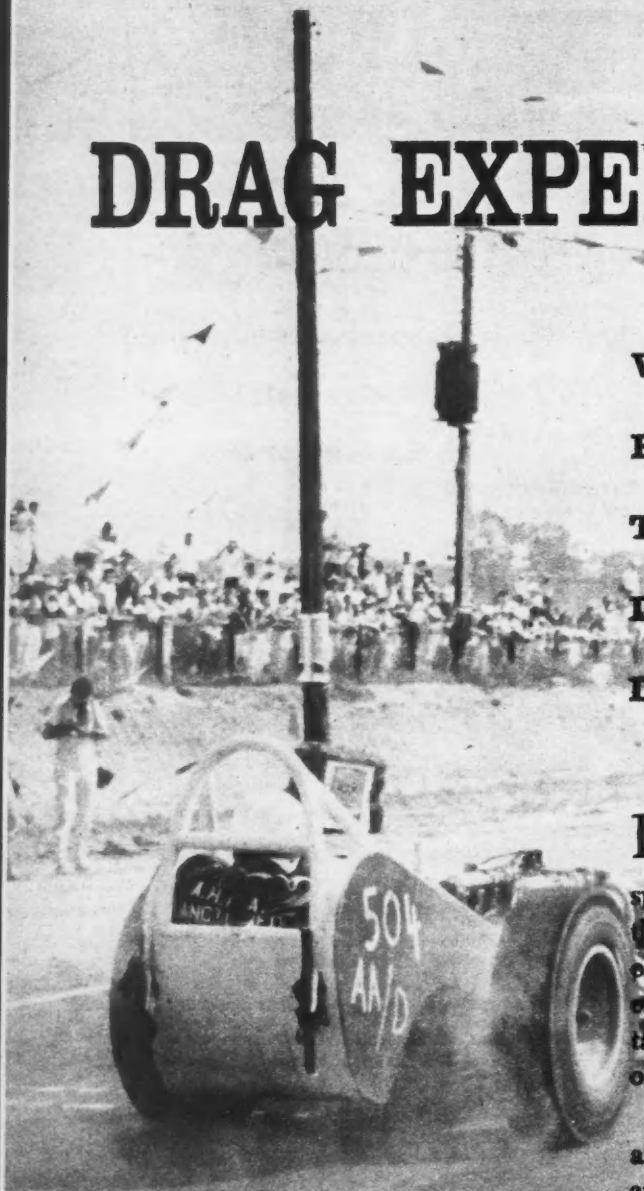
DRAG EXPERTS PREDICT



Who Will Win The Nationals?

How You Can Win

Tips On Favorite Engines

Dual-Engines VS Blowers

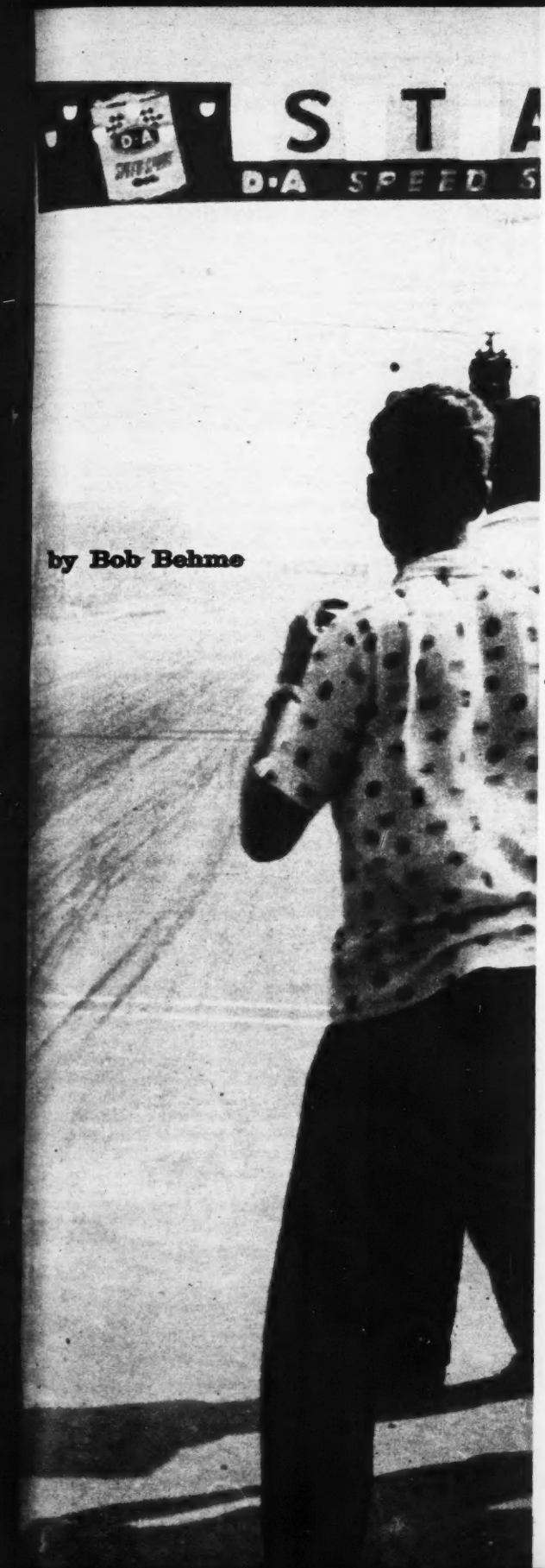
Driving Techniques

DRAG RACING IS anything but static. Sunday after Sunday new cars spring into action on strips across the nation. The result: top speeds go up, elapsed times go down. The reason: engines are improved or new engines take their places; new equipment replaces old; new trends shape and grow.

Once a year the best of the experiments and trends speed into national focus at the NHRA National Championship Drags. Here, a year of work sets the pace for the next year.

But what does it take to win the Nationals? If you were racing at the Nationals what kind of a car would you drive? What kind of an engine would you use? Would it be blown? How would you drive? Who would win?

These are questions for the experts to answer. CAR CRAFT asked twelve of the nation's top experts for the answers. Here, they tell how *you* could win the Nationals and how *you* can win on your home strip.



by Bob Behme

ROD SINGER

Winner of the Nationals, last year, Singer returns this year as defending champion. His win over some six hundred National competitors in '59 was accomplished with reliability and consistency — a must if you're going to win the 'big one'.

A dual-engined car will win this year's Nationals. From the news I receive from the west coast, dual engined cars are booming strong and fast. Still, things could turn out in a different, unexpected manner. After all, there's one headache with a dual-engined car: you've got twice the chance for trouble.

To win the big one, you need reliability and consistency. Last year, for example, we ran against many cars that had faster and quicker runs than we did, but when they came to the line against us, consistency worked in our favor and we won.

A dual engined car can win this year if it is dependable. Jack Moss, Tommy Ivo and Lefty Mudersbach all have top chances. Moss has had reliability problems. He's got more power than he can use and he has a hard time controlling his car coming off the line. That's where he'll win or lose.

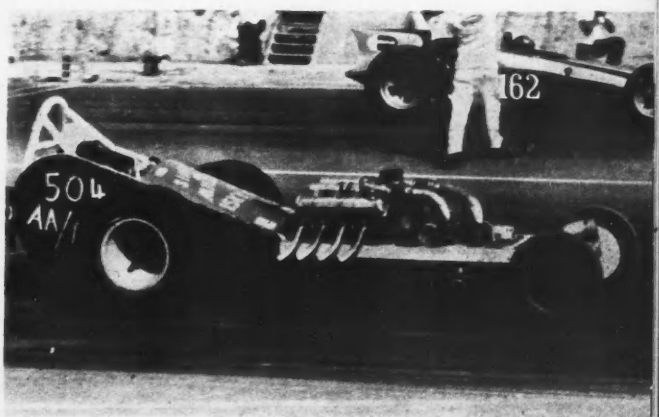
A blower is essential these days. It means more horsepower. The best way to use a blower is to build an engine to as many cubic inches as you can, then mount a blower on top of it. I'm running a GMC 671 on my big Lincoln and the results are good.

I was in class A when I jumped to a blower so the change had little effect. I don't think the jump in class hurts anyone. I know several 'C' class cars that were not winning. The owners mounted blowers on the engines, jumped into B class and started winning.

Blowers can mean trouble, but if you'll take time to make clearances right, take time to double check everything, you shouldn't have trouble. we spent half of last season getting our blower set right, then we ran the last half without a bit of trouble.

Backfire can be another problem if you don't have a good pop-off valve to let the pressure out. With a good valve you can feel safe. You can run without blower damage.

Lincoln is the best engine. I'm prejudiced, I know, but I believe it. I've run Olds and Cad engines — never Chrysler although I know it is good — and I've never found anything to equal Lincoln. It has so many possibilities.



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DRAG EXPERTS

JIM NELSON — DODE MARTIN

Owners and drivers of the Nelson-Martin Dragmaster, a potent, winning, Chevy-powered blown dragster. The car has taken on all comers at many West Coast strips. Nelson has raced on many strips and has a long record of wins. Martin, is a metal expert and also a top driver. The two are partners in Dragmaster Co., a new firm specializing in Dragmaster chassis, drag engines and accessories.

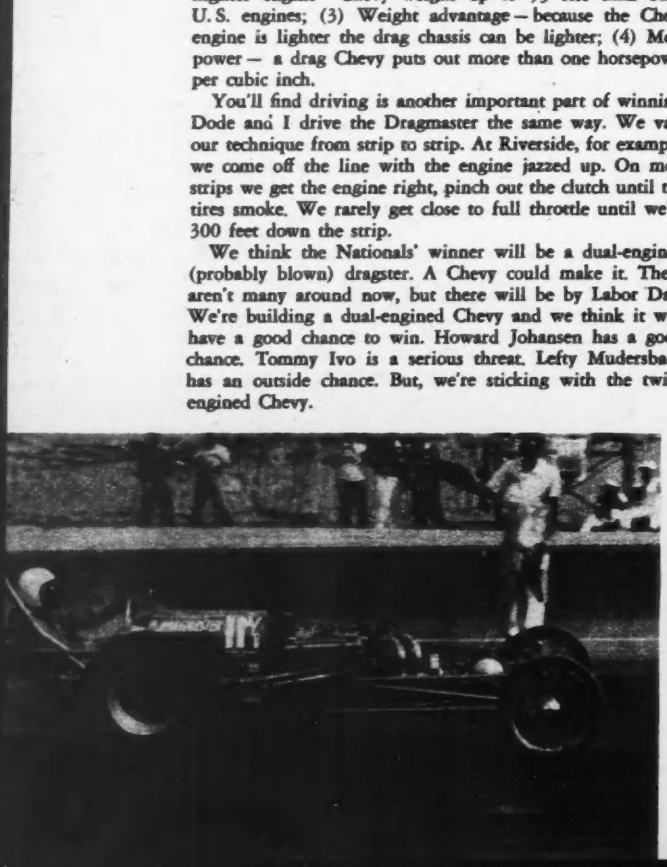
If you want speed, if you want to go as fast as you can you will end up at the wheel of a blown dragster. The odds are that you'll need a blown engine to win the Nationals this year. There will be more blown engines at Detroit than at any National before. There's a good reason; a blown engine out-performs an unblown engine. A small, supercharged engine will give more performance than a bigger, unblown engine.

Neither Dode Martin nor I recommend a blower if you are a new driver. Don't start with a blower. Race an unblown engined car first. Until you've had success with an unblown engine there is no reason to move up to a blower. A small, unblown Chevy, in a light chassis, can scare the daylights out of any new driver.

The Chevy will play a big part in this year's Nationals. You can expect to see a lot of Chevy and Chryslers. Pontiac has a lot of potential, but to us Chevy is the best drag engine. Our reasoning is simple: (1) Low cost — you can buy two heads, for example, for the price of one Chrysler head; (2) Lighter engine — Chevy weighs up to ⅓ less than other U. S. engines; (3) Weight advantage — because the Chevy engine is lighter the drag chassis can be lighter; (4) More power — a drag Chevy puts out more than one horsepower per cubic inch.

You'll find driving is another important part of winning. Dode and I drive the Dragmaster the same way. We vary our technique from strip to strip. At Riverside, for example, we come off the line with the engine jazzed up. On most strips we get the engine right, pinch out the clutch until the tires smoke. We rarely get close to full throttle until we're 300 feet down the strip.

We think the Nationals' winner will be a dual-engined (probably blown) dragster. A Chevy could make it. There aren't many around now, but there will be by Labor Day. We're building a dual-engined Chevy and we think it will have a good chance to win. Howard Johansen has a good chance. Tommy Ivo is a serious threat. Lefty Mudersbach has an outside chance. But, we're sticking with the twin-engined Chevy.



ART CHRISMAN

Sometimes called "The father of drag racing", Chrisman has been racing longer than most drivers. He has broken untold records, scored victory after victory. His current Camaro-Chrisman Hustlers I and II are potent, winning machines. One is a full bodied dragster; the other, an open roll.

The way you drive will be an important part of your chances to win. You'll be up against as many different driving styles as there are drivers to race against you.

If I'm driving a heavy car with plenty of horsepower, I try to ease out the clutch, feather the throttle and keep the tires powering. You can't let the tires break loose. Once they break loose you're through. You've got to learn to work the right power and the right acceleration.

In my 'Hustler' cars I sit on the line, jug the engine to the rpm I want. I've got plenty of power in the cars, actually more power than I need. I keep a steady rpm.

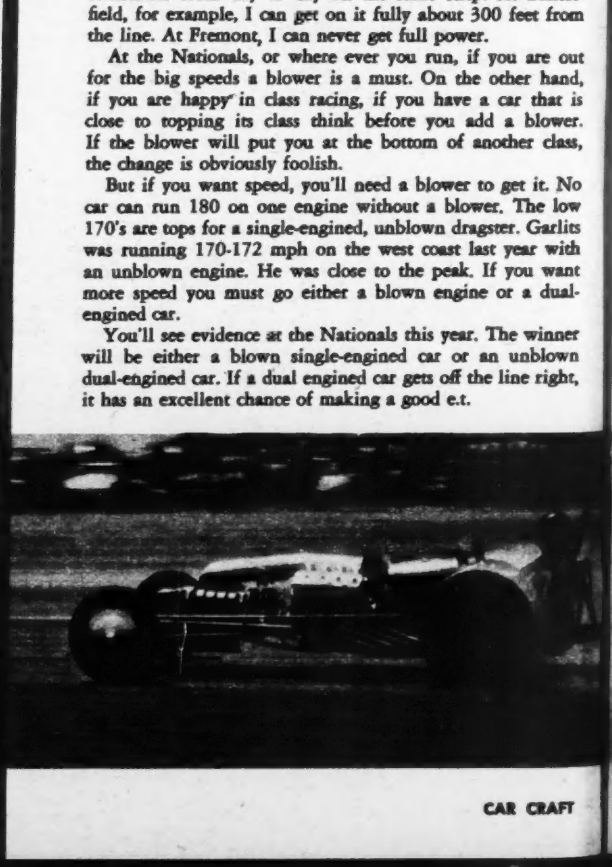
It is wrong to 'wing' the engine, working the throttle up and down, making the rpms flick all over the scale. You are taking a big chance of losing the race. If you get caught by the starter with the throttle in the wrong position the car could bog, losing precious seconds at the line.

Once I come off the line, I give the car gas as fast as I can and keep the car straight — that's all there is to it. The power your car will take varies from strip to strip and sometimes from day to day on the same strip. At Bakersfield, for example, I can get on it fully about 300 feet from the line. At Fremont, I can never get full power.

At the Nationals, or where ever you run, if you are out for the big speeds a blower is a must. On the other hand, if you are happy in class racing, if you have a car that is close to topping its class think before you add a blower. If the blower will put you at the bottom of another class, the change is obviously foolish.

But if you want speed, you'll need a blower to get it. No car can run 180 on one engine without a blower. The low 170's are tops for a single-engined, unblown dragster. Garlits was running 170-172 mph on the west coast last year with an unblown engine. He was close to the peak. If you want more speed you must go either a blown engine or a dual-engined car.

You'll see evidence at the Nationals this year. The winner will be either a blown single-engined car or an unblown dual-engined car. If a dual engined car gets off the line right, it has an excellent chance of making a good e.t.



PREDICT

MICKEY THOMPSON

Mickey is the most versatile driver in today's competition. Holder of the U.S. high-speed record at Bonneville, he drives a blown, Pontiac-powered dragster. Recently, at Bakersfield, Thompson beat Garlits. Mickey heads up a research laboratory where crews develop engines such as Pontiac for economy and test tires such as Goodyear for drag racing.

We're just scratching the surface of blower potential. The blown cars you'll see at the Nationals this year compare with the dragsters of 10 years ago. Kids were doing 100 mph and the experts were claiming that was close to tops. Today the kids are hitting 180 mph. In the next few years — maybe sooner — we'll see dragsters hitting 220 mph in the quarter. A blower will play a big part in it just as better tires and better chassis will help.

The big problem today is getting the power to the ground. Some cars running today have enough power to break 200. All that's keeping them from it are chassis and tires.

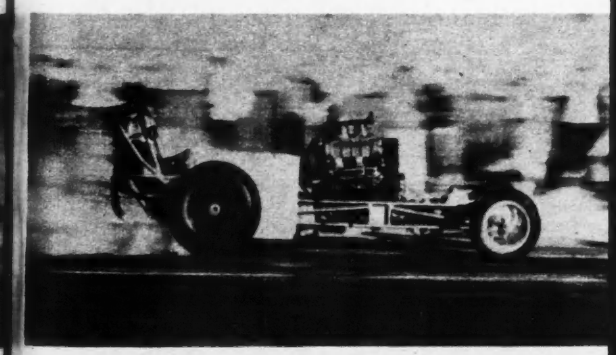
Chassis design has not improved in a long time. The big improvement has come in tires and they still have a way to go. Bodies, streamlining, have been greatly overlooked. The switch to the slingshot dragster helped. It put the driver lower and is areodynamically better than the older dragster stylings. Now builders are putting the blowers up high and re-establishing the old problems.

Even with the design confusion, the Nationals will show the best of dragsters up to this point. The low e. t. and top speed will go to either a dual-engined car or an aircraft-engined car — a car with more than 1000 hp.

You'll see new engine developments soon. The best engine is Pontiac. It has a lot of potential. I like the bottom end. Pontiac is improving faster than any engine on today's market. There are other engines with the potential of the much accepted Chrysler. The reason they are not used is simple: no one has taken time to develop them. I'm taking time to develop Pontiac.

Most drivers drive important meets best when they drive alone. They get excited when they come to the line against competition. They get on the throttle too much.

I hold my engine at a steady rpm (between 3500 and 4000 with gas and about 3000 rpm on fuel). I watch my rear wheels as I let out the clutch and give the engine gas. I make certain the tires don't smoke too much. You have to break the tires loose a little for the first 60 feet. If you have a tough clutch it is o.k. to slip the clutch a little. On a lot of clutches though, slipping causes breakage.



ART ARFONS

A pioneer in the development of aircraft-engined dragsters, Art Arfons and his brothers made the big-engined 'Green Monster' one of the nation's most famous cars. The Arfons brothers have won many important national, regional and local meets.

)NS MILL

1960 will herald the fastest Nationals you've ever seen or ever raced in. Right now, on strips across the nation, cars are breaking 180 mph on fuel and the gas boys are close behind, pushing hard on their records. Some of the boys have a few secrets up their sleeves you're not seeing at the regional meets.

Cars will have to run close to 200 mph to win this year's Nationals. The winning e.t. will be close to 8 seconds and you'll see a lot of e.t.'s in the 8 second bracket.

It will take an aircraft engined car to win this year's National Drags. There are seven aircraft-engined cars around now. All of them can't break down. One of them has to win!

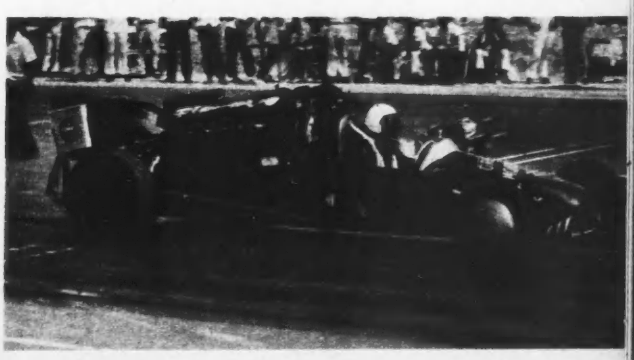
Blowers are important at all drag meets. But you should plan all the way for a blower. You build a car for a class and you should build an engine for a class. At the time you're building the engine you should decide whether you want a blown engine or not. If you do, build for it then.

I think a blower is essential to winning. You get so much more power with a blower. I feel you should build a car, then put on all of the goodies you can find for a really fast machine.

A blower can be trouble free. Most of the fellows are running GMC blowers. If you mount them right, set the clearances right, there is no headache. In a quarter mile run you shouldn't get enough manifold pressure or heat to give detonation.

On my Bonneville car I'm going to be running a full 70 seconds. That is long enough to create manifold pressure problems. I'm going to two-stage the blower, put a blower on top of a blower, to solve the problem.

Driving the quarter mile is easy enough. I slip the clutch a little bit, using a slight throttle, as I leave the line. When I am about a third of the way down the strip the clutch is all the way out and I'm on full throttle. I'm putting a low gear in my car for the Nationals this year so I can handle the power better.



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TOMMY IVO

An ardent hot rodder, driver of a twin-engined Buick dragster (unblown) Ivo has a long record of wins. He is always a tough competitor and is a serious threat at this year's Nationals. An actor by profession, he is currently seen in the Donna Reed Show on television.

DRAG

Drag racing follows yearly cycles. 1958 was the year of the switch to gas. Last year was the year of the switch to blowers. This is the year of the switch to the news that blowers are not all good.

You'll find (if you haven't all ready) that it is difficult to run consistently with a blown engine. At an important event such as the Nationals, consistent performance is the key to winning. There is a lot of competition in every class at the Nationals. You'll have to run against a lot of them. To win, you need consistent performance off the line and down the strip.

There is no doubt that blowers put out more power but power is not the only answer. Drag racing is like a scale – power is at one end, consistent performance is at the other. To win you've got to compromise to get both power and consistency.

You'll have to gear your driving to your car. When I drove my single-engined car, for example, I sat on the line, ran the engine up to 3000-3500 rpm, whipped out the clutch to lift the front wheels off the line to put the power on the rear and took off.

I drive my dual-engined dragster in a different way. I run the engines to 1000-1500 rpm on the line, slip the clutch for the first 30 feet, then drive the car like a hydramatic, easing down the throttle until (sometimes it is half way down the strip) I can get onto full throttle. Once I get away from the line I let the car go where it wants, within reason. It is a mistake to keep the car too straight just as it is a mistake to let it get too far out of hand.

You may be able to use one trick I like; keep your hand brake on at the line. Just before the starter gives you the starting signal let the clutch out – just a little – enough to let the engine take up the slop in the line. When you get the signal you can take off smoothly with none of the initial jerk that breaks tires loose. In the old days you had a crew holding your car while you did this: today, you've got to do it yourself.

You'll have tough competition at the Nationals this year. If everything goes as it should, if the Nationals are run as they've been in the past, you'll see a dual-engined car winning. There are several dual-engined cars capable of it now and there will be more before the Nationals. There are even some 3 and 4 engined cars either running or in planning stages. It is the latest way to more power.

DON GARLITS

Tampa, Florida speed merchant Garlits is one of the most controversial fastest figures on the current drag racing scene. In the west he has been clocked at speeds from 172 (unblown) to 187 (blown) and in the east has made several runs at higher speeds. East or West, Garlits is currently the fastest speed merchant in the U. S. Driver, Art Malone, who now handles Garlits' car almost exclusively, has clocked the same speeds.

The engine you choose for your dragster is an important part of your chances of winning. If you are planning a single-engined dragster, Chrysler is the best choice. If you are planning a dual-engined car, Chevrolet is the best choice. If I was building a dual-engined car (I'm not) I'd choose Chevy. It is equal to Buick in every way, yet it is less expensive.

You'll need a blower. I hated to see the day blowers arrived on the drag racing scene. It made dragging tougher for the small guy. My old car is a good example: it cost $1500 and I could race the best cars in the country. Now, when I want to race the top dogs I have to put another $500-600 in a blower drive set up. That kind of money cuts the small guys out of big-speed drag racing.

Still, let's face it: a blower is essential if you want to run 180 mph or better – a blower or a twin-engined car. 175-176 mph is absolute top speed for an unblown, single-engined car. You can go faster, blown, I've proven that. You can run faster with two engines, Ivo and Johansen proved that.

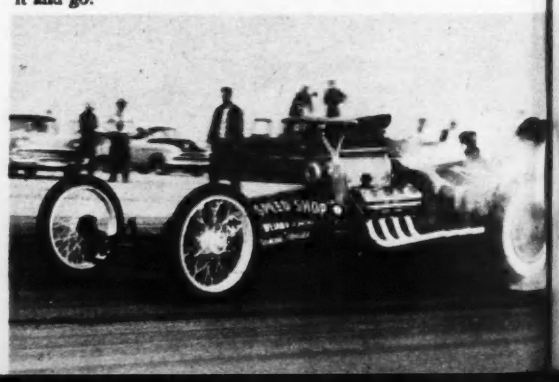
A blower is hard on an engine. The big blower trouble comes when you use fuel. The headache is detonation. I've got the problem whipped, but I'm not spreading the secret: if I did everyone would be going as fast as I am. My car runs cool. I ran both days at Fremont on one set of plugs and I'm still running them. Water cooling is not the answer.

At the Nationals, low elapsed time and top speed will be taken by a blown, dual-engined car, this year. Top Eliminator is another story.

Ivo has a good chance to win, but he's got to get more consistent to do it. If he can be more consistent coming off the line, he may have the Nationals. Glenn Ward, in Howard Johansen's Special, is a real threat. Howard's car is a runner.

Every man has his own way of driving, at the Nationals or at local strips. I try to leave the line with a light foot. Art Malone and I tried slipping the clutch, but the technique didn't work for us. The important thing is to save the clutch. We use a steel clutch but we still have to watch it.

We keep the engine rpm around 3500-4000. We can't really tell, there is no tach on our car. We let the clutch out all the way, feed enough gas to the car to get the wheels set, give the car full throttle, back off and repeat until we're about 300 feet down the strip. Then, we put our foot in it and go!



EXPERTS

BILL HOPPER

IN 1957 Ted Cyr and Bill Hopper, who had several years of individual drag racing behind them, joined forces. The team has since been one of the hottest, most successful drag racing teams in the U. S. The two have won a host of important drag meets including the NHRA Nationals in 1958.

You'll see a twin-engined, blown Chevy winning the Nationals this year. If you need proof check the more important west coast strips any weekend. Howard Johansen is on the right track. Tommy Ivo is on the right track. For a two-wheel drive machine these two have the best ideas. Some of the twin-engined cars have yet to find the best drive and engine placement combination, but they'll get it before NHRA's 'Big-Go' in Detroit comes Labor Day.

The only faster (and consequently better) answer may lay in 4-engined dragsters. It will take a 4-wheel drive, 4-engined car to go 225 mph in a quarter mile. We'll see these speeds in a year or less.

Fuel is no problem at the Nationals where gas is king, but if you ever run fuel, the big problem is detonation at high speeds. Garlits has the answer to it or he's on the right road: that's why he can run so fast. If the rest of us can solve the same problem we'll all be running fantastic speeds.

Speed is important to winning. If you want speed that wins meets you'll find that a blower is a necessary evil: evil in the sense of the speed blown engines make possible. Some of today's strips are not safe at 180 mph, yet today you've got to run 180 mph or better to stay in the competition.

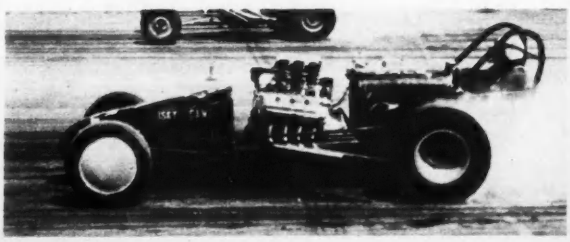
A blower is fabulous — fabulously good if it is used properly, fabulously bad if it is improperly used. Backfiring is the big blower danger. With gas, a mild backfire will do little or no damage, With fuel, even a mild backfire will shut you down with a broken belt or more serious trouble.

You'll have the best chance of winning an event such as the Nationals if you build an engine that will run fast and clean. You won't have to goose the engine coming off the line.

We try to keep full throttle down the strip, it takes that to win the e.t. We let the clutch out half way, slowly, until the rear tires begin to smoke. Then, we let the clutch out all the way — and charge!

We make every effort to keep the front wheels on the ground. The front axle of our dragster is full of lead, some 75 pounds of it, to help keep the wheels down. It gives us better steering (you can't expect to steer with the front wheels off the ground). The extra weight doesn't affect our speed.

New drivers make a serious mistake on their early trips down the quarter mile. They try desperately to steer a perfectly straight course. You'll do better if you let your car have its way a little.



PREDICT

HOWARD JOHANSEN
GLENN WARD

Glenn Ward, who has been fast and fast in rodding for a long time, drives the Howard Special, a dual-engined dragster that has been clocking top times at many strips. Built by Howard Johansen, builder of Howard's Cams, special rods and engine components, Johansen and Ward make a potent drag strip combination. The car, with Ward at the helm, has a top chance of winning the 1960 Nationals.

Your choice of engine — or combination of engines — will play an increasingly important part in your chances of winning any drag race just as it will play an important part in your winning chances at this year's Nationals.

Although the ultimate winner will have to rely on luck as well as his engine, it is fair to guess that the winning car will be a blown, twin-engined dragster. In fact, it is a virtual certainty that the car with the fastest e.t. and top speed will be a blown, twin-engined car.

The selection of the engine is open. There are many possible choices. Chevrolet is an excellent engine for a small dragster. Lincoln or Chrysler are good for big dragsters.

Chevy seems the wisest small engine choice because it is so inexpensive. I think that a blown Dodge can outperform a blown Chevy but there are virtually none running: how can I prove it?

A Lincoln or Chrysler is my top choice for a big-engined machine. Olds should not be counted out, but Lincoln has the advantage of brute size. It is big to begin with and you can make it even bigger. Still, I feel that a Chrysler will out perform any U. S. engine.

Dependability is drag racing's most important cannon law. You need it to win. To get it you must follow certain long-accepted percepts. Don't bore any engine if you plan to install a blower. The walls will be weakened by boring and once you add a blower you are courting undependability. Stroking helps any engine, but, to keep the engine dependable, don't go too far. For a Chevy, as an example, should never be stroked more than ⅜.

Aluminum rods are a help. If you are running a blower use forged pistons. If you are running a blower use a cam ground for the blower. We've done a lot of experimentation with blower grinds during the last year and we find that a special grind for blown engines increases performance. When you are racing for top honors the difference a special blower grind can make is often the difference between victory and defeat.

Glenn Ward is an excellent driver. He doesn't get excited when he leaves the line. He keeps his head and that often helps him win over tougher competition.

Ward doesn't use a lot of throttle coming off the line. He engages the clutch, fully, then starts using the throttle. We've got so much power in the car, more than we need, that Ward has to drive the entire quarter mile getting off and on the throttle. If we can get more traction I hope to go to bigger engines. The ones now are only ⅜ stroke.

The Nationals are the time for experimentation. We plan a couple of radical changes on our car for the Nationals. If you're watching I hope they work out.

THE TEACHER'S COUPE

A '36 Ford like this makes school-teacher Bob Stonoff the envy of all his students

Photos by George Barris

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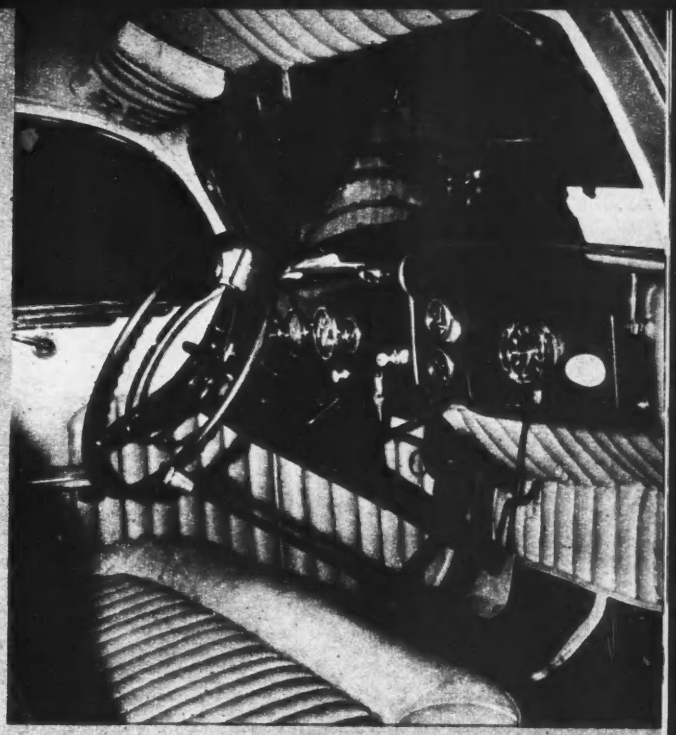
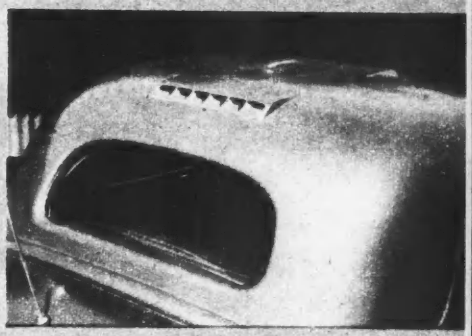




Bob Stonoff and his brother Stanton, both of Tempe, Ariz., did all bodywork and upholstery. Molded body is painted a Mediterranean Blue lacquer. Engine is stock J-2 '57 Olds.

Pleated and rolled Naugahyde abounds in coupe's cab. The colors are Baby Pink and Baby Blue with dark blue rugs. A '57 Chev steering wheel and assembly is utilized on Ford.

Smooth roof has two '58 Impala scoops molded to front and rear. All glass has been replaced with tinted safety plate. Two years spare time was devoted to construction.

Front end has '40 Buick grille mated to '40 Ford fenders. The hood has portions of both '36 and '40 Ford parts. Quad lights are frenched '58 Ford units, bumper is '49 Plymouth.

Molded stock rear fenders mount steel and round rod formed taillight extension with quad '53 Pontiac lenses. Gravel pan is molded. Running boards are combo of '36, '40 Ford.

JET AGE

'Just like stopping in an elevator', is high speed drag racers' feeling in safe, controllable 'chute-stops

By Bob Behme

YOU ARE LOW IN A twin-engined dragster, spine tight against the hard metal seat, legs straight, knees arched slightly over the rear axle. At any moment a signal will send you down the long, narrow asphalt.

Muscles are tense: right leg tense as your foot works to hold the throttle steady, engine at a ready rpm. You arc your left leg, to ease out the clutch—just a little.

There's the signal. Your body works against the car as it moves away from the line. You check the car's power with a quick glance at your smoking rear slicks. You hold your right foot steady. You are 40, 50, 60 feet down the quarter mile.

The car no longer feels mushy. The tires have taken hold. You push forward, then, you feel almost no speed.

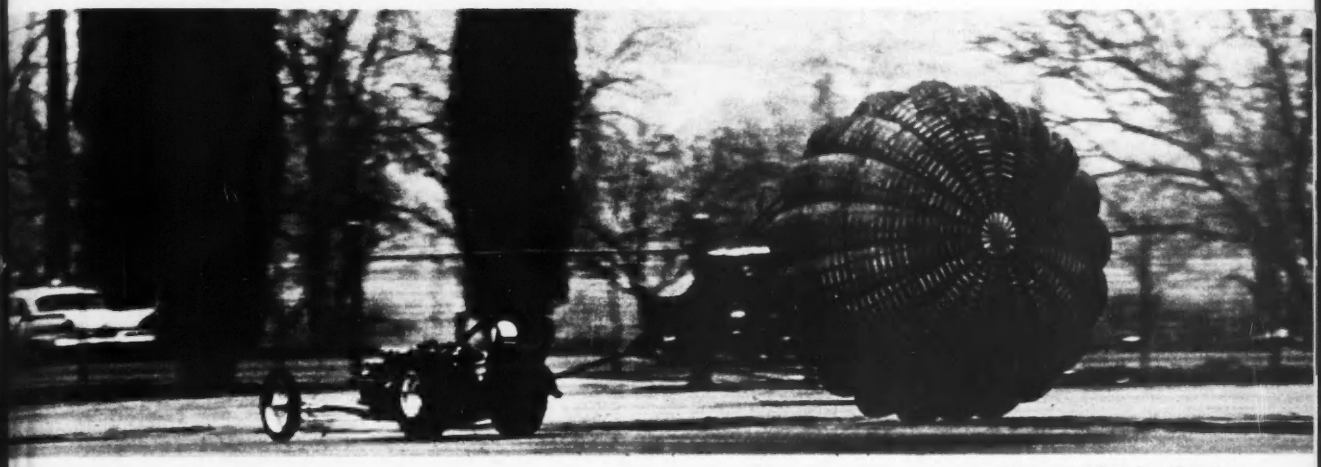
You can feel the side to side waves of the rear end against your spine. Your hands move quickly to keep the car straight. The wind works against your face. The timing lights grow bigger; they are beside you, now behind you. Ahead are the final 1700 feet of asphalt. Time to stop. Can you?

Since rodding began, since the first driver climbed into the cockpit of a hopped-up car, punched the throttle and headed down the quarter mile to see how fast he could go, the big reason for rodding has been speed and time. Together they have built headlines but unmentioned yet as important as the ability to go fast, has been the ability to *stop*.

Today's faster top speeds and quicker elapsed times have increased the problem of stopping. Some drivers have met the problem with bigger brakes and better linings. Some strips have met the problem with increased stopping areas. On some strips there is no more room. But bigger brakes or more shut-off room, the higher speeds have sharpened stopping techniques.

One solution which may revolutionize drag strip stopping, increase brake wear as much as 25% and increase time wear as much as 33% is the newly developed ribbon parachute. With a year of testing behind it, the chute brakes are proven and accepted by many drag drivers. You will see them in action at this year's Nationals on cars driven by Glenn Ward (Howard's Special), Tommy

STOPPING



Photos courtesy Deist Drag Chute Co.

Ivo (Ivo's Red Bomb), and James Warren (Bob's Muffler Special).

For drivers such as these, the shut-off holds no terror, no problems. They reach for a small, chromed ring beside them, hook two fingers in the ring and pull. A big, blue chute billows behind their cars, a gentle hand pulls them to a sure, safe speed. Even without braking, the chute slows them gently to 30 miles an hour in less than 1700 feet.

For many rodders safe braking today lies in a 16 x 16 inch pack mounted on the tail of their dragster.

The chute works simply. Four flaps which seal the chute, fold over and are held closed by a thin wire pushed through a small loop of shock cord pulled through grommets in the four flaps. When the hand release is pulled the wire is pulled from the loop. The four flaps pop open.

Inside are two chutes. On top a small, conical pilot chute: below a big 16 foot main chute. A 4 to 6 inch compression ring inside the pilot chute punches it 5 feet behind the car. The cone shape quickly fills the pilot chute with air. The air-filled pilot chute drags, pulling the main chute out of the pack. The main chute fills with air, billowing like a giant mushroom 12 to 18 inches above the asphalt. The drag of air against the main chute does what your brakes often cannot do: slows your car from 170 mph to 30 mph in 1300 to 1600 feet.

Such chutes have been called "The world's fastest brakes". Very possibly they are. Although they are not meant to replace more conventional braking systems, designed instead to augment them, chutes are faster acting than brakes. Chute brakes take a definite, positive hold within 300 feet on many cars, within 450 feet on even the wildest car. They continue to decellerate the car until it reaches 30 mph when the chute collapses.

Although the idea is new for dragsters, it is backed by a long history in other fields. Twenty-five years ago parachutes were tried on over-the-road diesel trucks, an effort to provide safe stops for runaway trucks. By 1942 smaller versions were working for the Air Force, pulling cargoes out of the holds of bombers. By 1945 jet fighters were using tail chutes to stop on short runways. The prototype of the present drag chute came from Germany, designed during World War II for missile work.

The first hot rod use came late in 1958. Abe Carson, co-owner of the flathead-powered Hartman and Carson dragster approached Jimmy Deist, a chute engineer with the Irving Chute Company, in Glendale. Deist and a partner built a special chute for Carson who tried it on 75 runs at San Fernando and Long Beach strips.

At the same time, Akron, Ohio speed merchant Art Arfons tied a chute to the tail of the Green Monster. These were the first uses recorded.

Deist began to manufacture the first drag racing chutes in 1959. Later, working with Harry Field, Deist-made chutes were sold through the Safety Chute Company. Together, and individually, the two men have promoted drag racing chutes.

Art Chrisman tested the 2nd chute Deist produced, on the Chrisman-Cannon special. Mickey Thompson used a pair on his Bonneville Special, another was tested on Jim Nelson's Dragmaster I at San Gabriel and Glenn Ward tried one on the Howard Cam Special.

Today, a host of drivers rely on chute brakes: Tommy Ivo, Gary Kagle, Lefty Mudersbach, Glenn Ward, Chris Karamasines, Tom McCuen, Ernie Hashim are a few. All like the way the new brakes work.

"You don't have to worry about what to do at the end of the strip," Kagle said recently, "with a chute open behind your car."

"I wouldn't race without one," Ivo commented.

"A chute is not only brake safety," Ward said, "but it also means control, badly needed control."

Roaring down the Colton strip, not long ago, Ward's car started to sway at 163 mph. Suddenly, the car was crossed up, heading for the dirt, Ward pulled the release ring. the

CONTINUED

JET AGE STOPPING

chute tumbled out, filled quickly with air and helped swing the car's rear end straight.

At Bakersfield, Art Arfons, at the wheel of the Green Monster, hit into a power drift at 175 mph. He pulled the chute release; the car was out of control, he had nothing else to do. The drag of the chute against the rear of the car, helped keep it straight and the results started within 300 feet.

"This is the first time," Arfons said later, "I can drive my car at anything close to its full potential, without the worry of control on the strip or the worry of stopping at the end."

The backbone of the new chute brakes is a 16 x 16 inch plywood board covered with waterproof nylon, drilled for a variety of dragster mountings. Generally, the pack is mounted to the rear roll bar or frame stiffener with either two-plumber's "U" clamps which circle the bar and bolt to the pack board or with "L" flaps welded to the bar and bolted to the pack.

The pack can be mounted as lightly as this anywhere (the only restriction – there must be no push bar or frame extension below the pack to tangle open chute lines) because the pack bears none of the braking stress. .

"The drag is transmitted to the car through the suspension lines which comes from the main chute," Harry Field points out, "There are twenty such lines and at the car the lines are gathered into a loop and attached to the car at the roll bar, as close to the axle line as possible – not more than 8 inches above the axle in any case."

The suspension lines are mounted to the roll bar through a system of one or two heavy-duty connector links, or through a "U" shaped bracket and a bolt which secures the loop. Since the pack, chutes and lines are made of waterproof nylon there is no danger of rot, mildew or disintegration but nylon will fray and the area around the mounting must be free from sharp edges to prevent this.

Properly mounted and used the 16-foot main chute should be good for approximately 500 runs. Opening does not affect the life of the chute. The real wear comes at low speeds when the chute deflates and is pulled along the runway. Here, abrasive surfaces cut into the nylon fibers and shorten life. Most drivers turn at a right angle to the course the moment the chute deflates, to reduce the abrasive dragging. Reduction of dragging increases chute life. The pilot chute, the small chute outboard of the main chute, wil last for 50 to 100 stops.

Despite its apparent value, many drivers refuse to accept the idea. Some, simply because it is new, some because it does affect the balance of a critically balanced car (the chute weighs 16 pounds installed; on some cars this is too much weight at the rear, causing the car to wheel stand) but most drivers who have tried it like it and find it easy to use.

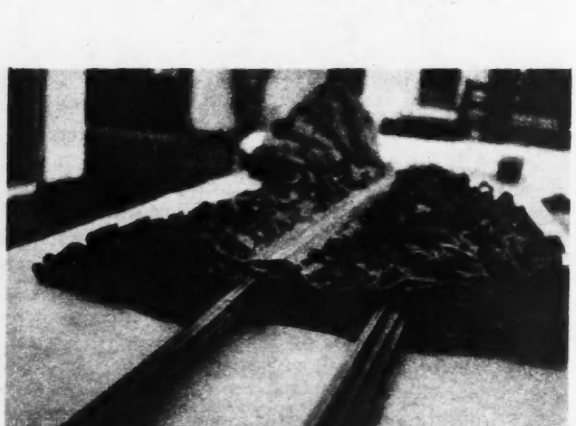
Packing is simple. It takes about 10 minutes to repack a chute after it has been used. After a chute has been used, most drivers pull quickly off the strip, stuff the chute into their cockpit and repack the chute once they have returned to the pits.

To pack, pull the chute (main chute and pilot chute) to its full length. Walk to the car, and at the mounting where the lines are joined, separate the two rows of suspension lines while walking toward the chute, keeping the rows separated. The suspension lines are numbered 1 to 20: lines from 1 to 10 are gathered on one side, lines 11 to 20 on the other. To pack you gather the main chute panels 1 to 10 on one side, 11 to 20 on the other, both segments of folded panels flat in front of you.

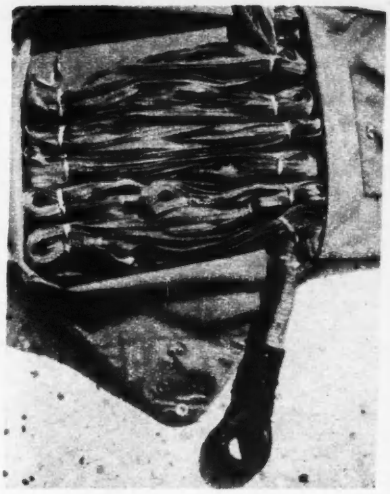
There are two rows of rubber bands on the pack. The ends are looped around nylon cord mounted to the pack. As a helper keeps the main chute in order and the suspension lines taut, the lines are gathered, folded in an "S" shape and the edges of the folds tucked into the rubber bands.

The main chute is gathered like a coat (without unfolding the previously folded panels) and folded in-

1. To repack a chute after a run, the suspension lines are separated, beginning at car and working toward the chute.



2. Suspension lines have been separated, aligned and the main chute has ben folded, ready for packing in chute pack.



3. Suspension lines are folded in "S" shape and tucked under rows of rubber bands. Bottom loop hooks to car.

4. The main chute is then folded on top, taking care to work outer edges of the main chute into corners of the pack.

5. This series of photos shows the pack out of the car but same method is used when attached. Fold chute in "S" shape.

6. White spacers were folded into pack to illustrate the "S" type of fold. The pilot chute is uncompressed on top.

7. Pilot chute is compressed, flaps folded over to a small loop on top of pilot chute, pulled thru grommets on flaps.

8. Square flaps are folded over first. The pilot chute loop is pulled thru grommets in order, cord used as leader.

9. Next rounded flaps are folded over on pack and loop is pulled thru. Outside flap has snaps to hold cable release.

10. Loop is held tight in final grommet and cable release forced thru loop. This holds back closed, ready for use.

CONTINUED ON PAGE 60

RESTYLING

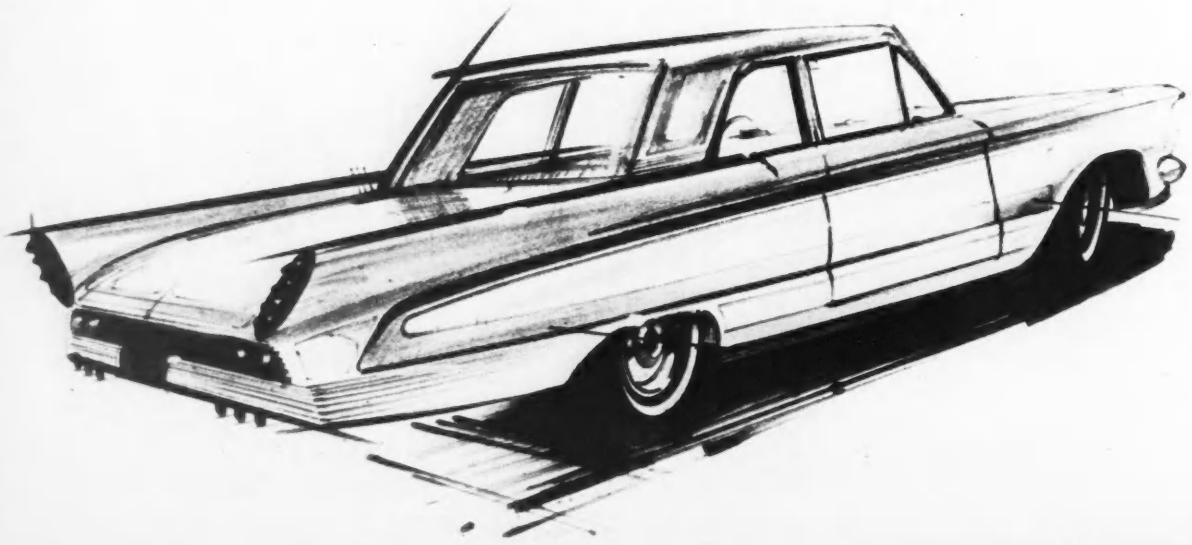
illustrations by larry evans

FORD MOTOR COMPANY'S latest brainchild of the compact class is our customizing bait this month. The big brother to the Falcon and little brother to the Ford, the Comet possesses many natural attributes that are helpful in attaining an aesthetic custom. Its basic lines are compatible with the latest styling tricks and techniques. The Comet also resembles in many ways some of its brother cars, making interchanging of parts easy.

With a budget of about $1000, we fitted a '60 Edsel grille assembly to the front end and added another headlight on each side making a total of 6 straight-ahead beams. All chrome has been removed, naturally, and the addition of a small airscoop has been made at the front of the rear fender fin. Ribbed chrome trim from a '60 Ford has been installed on lower panel directly behind the rear wheel wells, and an additional piece is trimmed and mounted on the rolled rear pan. Dual bumpers from a '60 Rambler are used in front for protection, but none are employed in the rear. License plate mounting is provided in front between the two bumper bars.

A rear end grille is constructed and is composed of thin tubes for straight bar grille effect and four '59 Cadillac taillights—chrome plated. The regular taillights are also '59 Cad units, four to a side. This installation warranted an increase in the size of the fender/taillight opening, therefore it is enlarged.

Three aerials are recessed beneath the surface of the trunk lid for 'something extra' and six scavenger-type pipes are found beneath reworked rear end.



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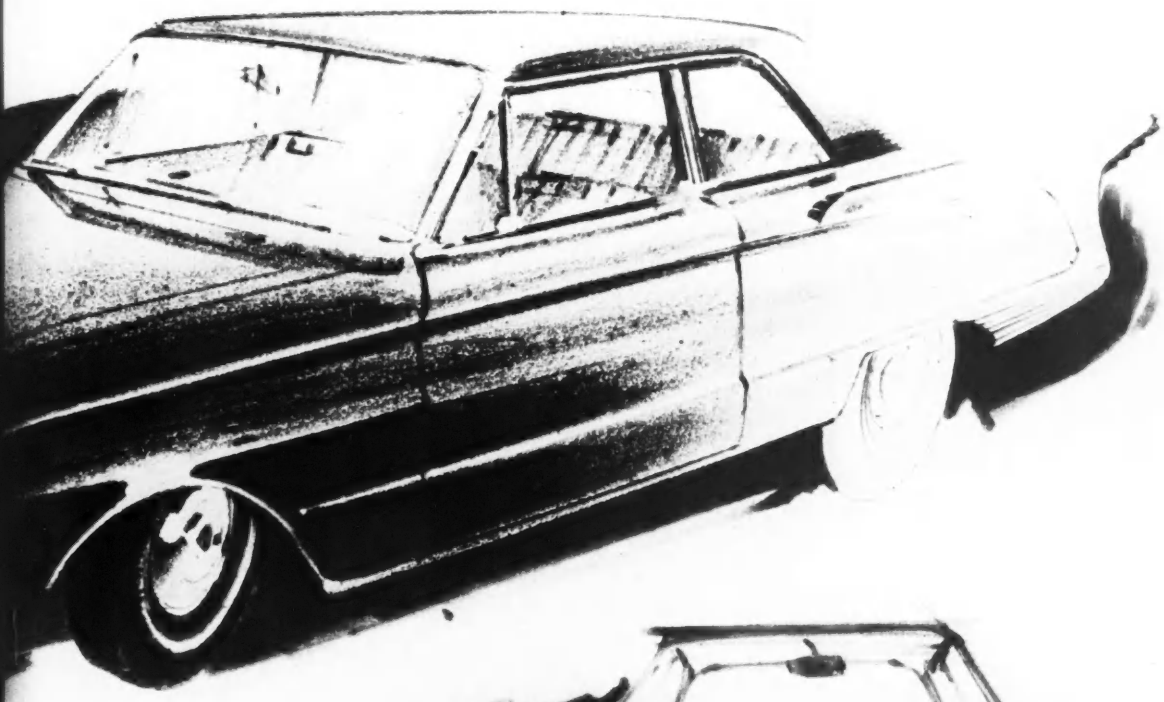

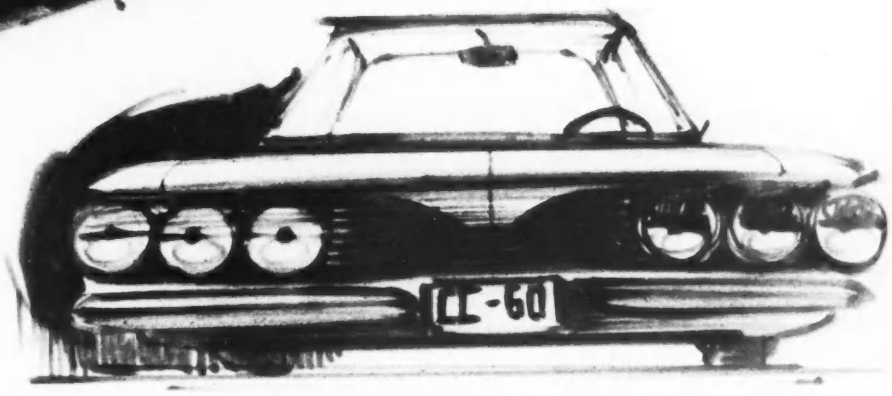

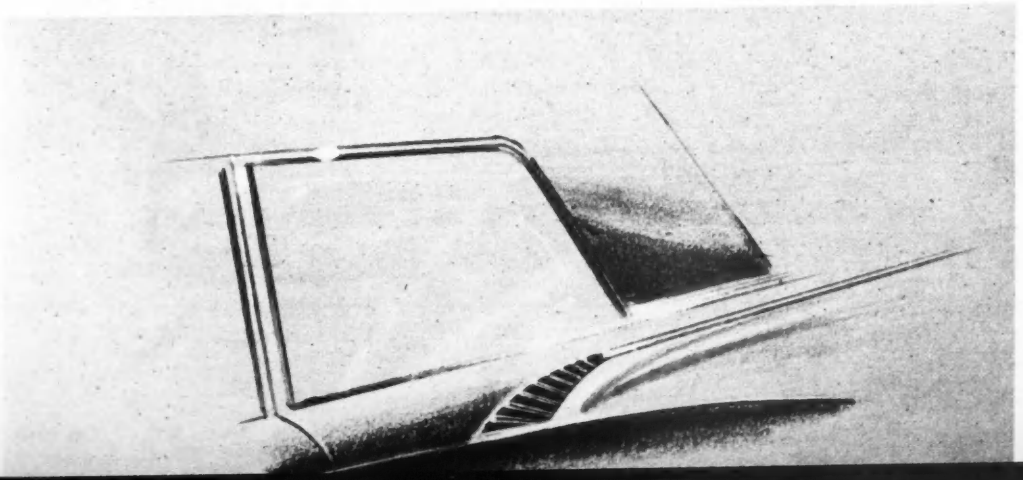

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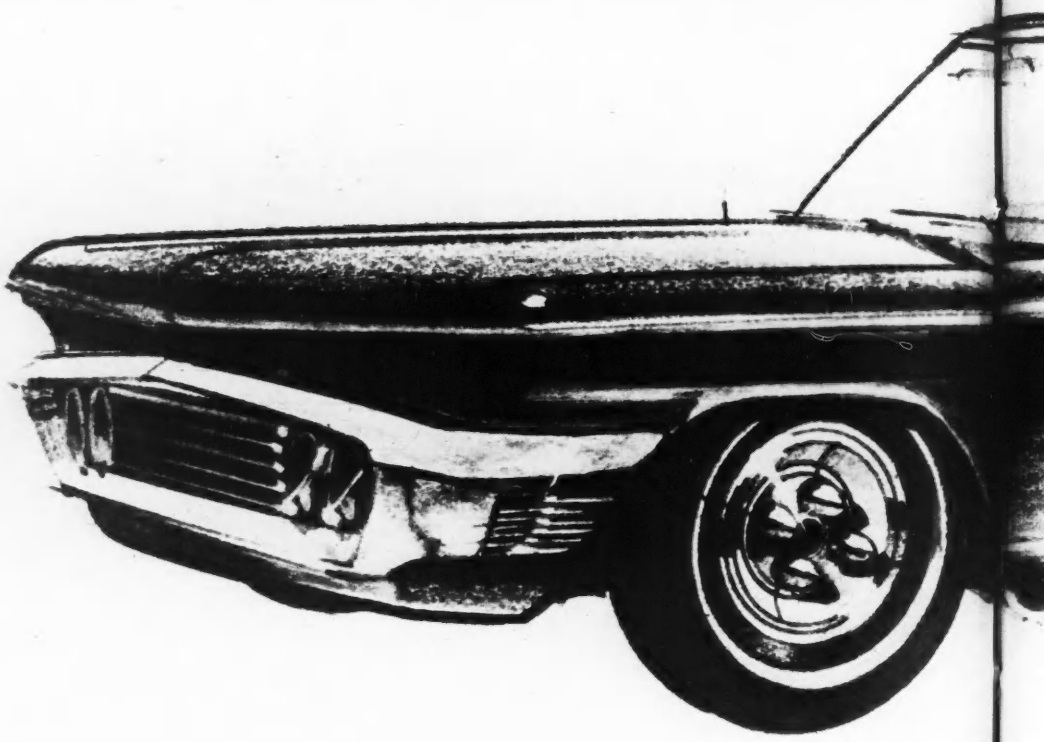
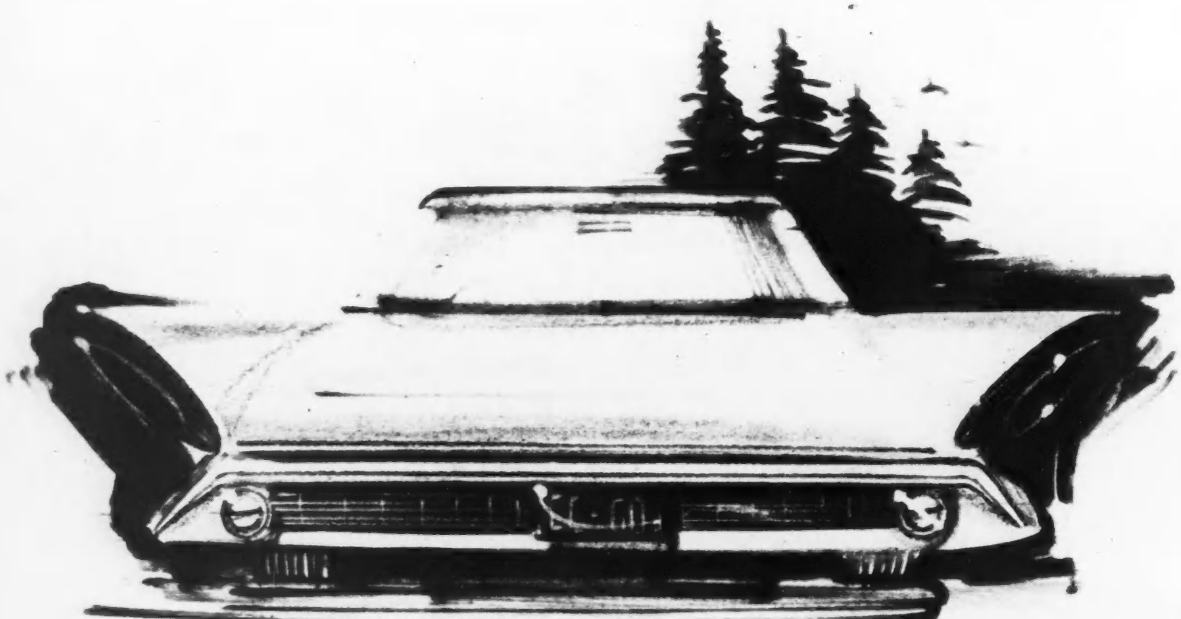
...RESTYLING...to wild

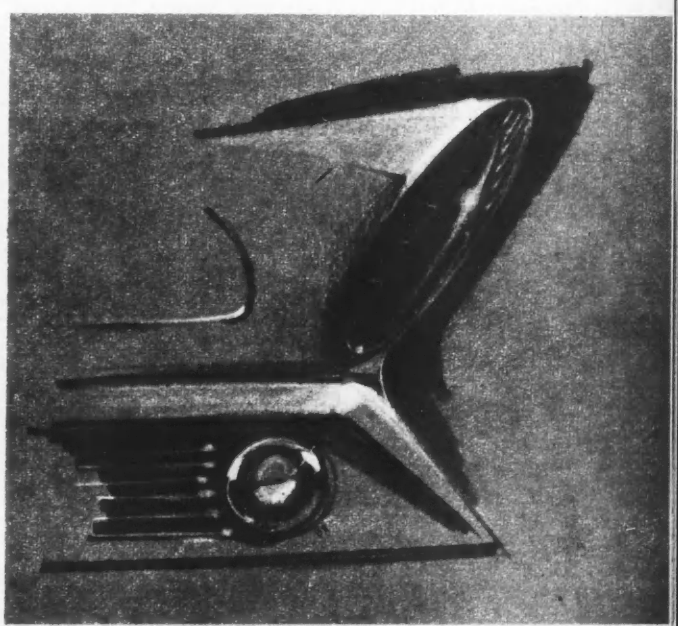




TWO VERY IMPORTANT Ford parts are used in our radical version of the Comet. The first and most obvious is the cut-down '59 Thunderbird grille assembly. The headlights are placed within the borders of the frame and as such, the front end is completely molded smooth. The stock platform line that commences up front and runs the full length of the car is modified in the rear with the addition of a sheet metal formed fin. In the fins are '59 Chevrolet taillight lenses, frenched-in.

The front wheel well is recontoured and the rear is covered with handmade skirts, giving further resemblance to a 'Bird. The second important Ford part utilized is the top which is a '55 T-Bird fiberglass hardtop with an extension added and a wrap-around rear window.

Hardly noticed is a three-inch sectioning which gives new appeal and sleekness to body. A rear grille is also added, framed by a trimmed '60 Oldsmobile bumper. Three aerials are mounted on the deck lid, exhaust pipes exit from flared fairing beneath doors.



Specially formed top utilizes three separate sections of pleated, rolled and padded upholstery. The center strip is in corresponding color to body, remainder is white Naugahyde.

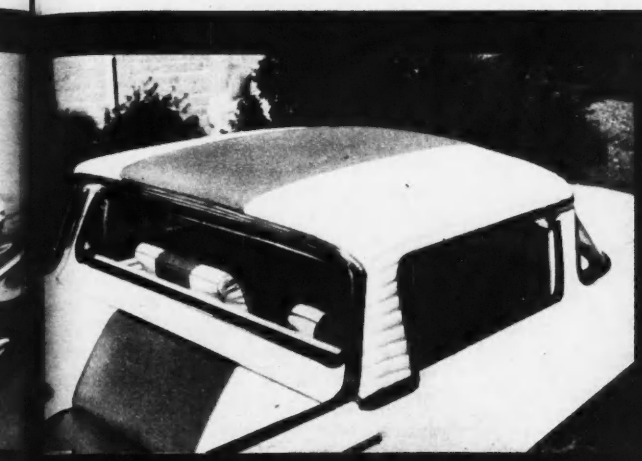
The chrome moldings on this '58 Bird make a padded top an easy installation. Pearl Naugahyde has ½" pleats sewn at an angle; beading separates plain center section from pleats.

TOPS IN PLEATS

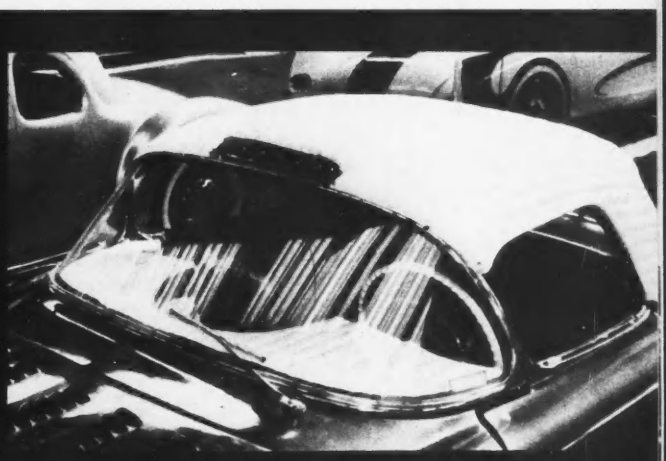
The pleat and roll upholstery theme has risen to new heights in unusual setting

Silver and white are the colors of this padded top with two-inch air foam fill. Chrome beading separates panels of ½" pleats from smooth Silver Naugahyde on this '57 T-'bird.

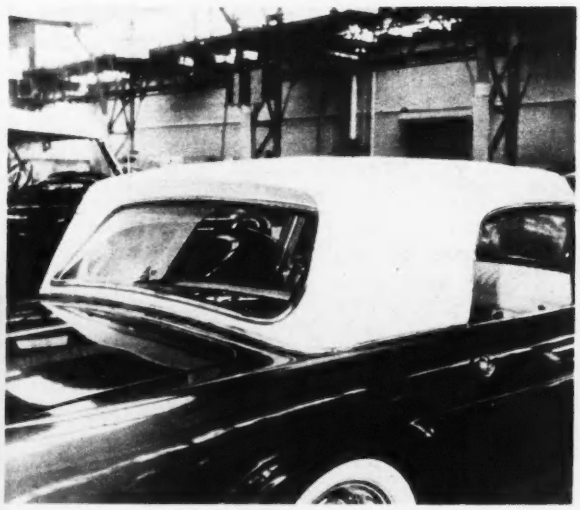
A chopped '54 Chevy provides the top for this creative roof upholstery. Cotton and air foam stuffing with a contrasting bead give contours to the white Naugahyde material used.



Chopped four inches, the top of this '57 Ranchero has air foam filled pleated sections on either side with center strip of contrasting Naugahyde. Chrome stripping is handmade.



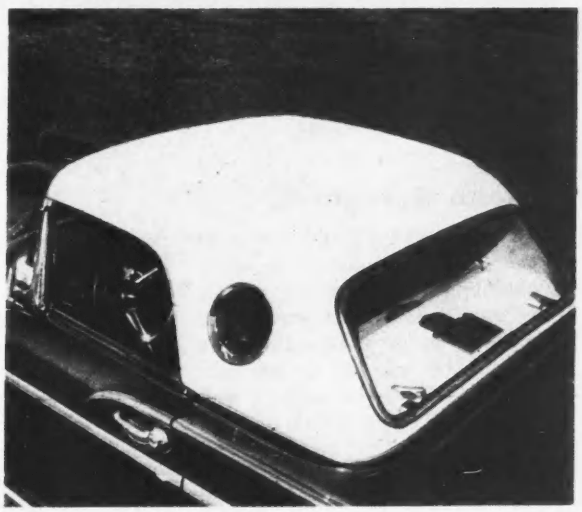
A fiberglass top was designed for this '55 Corvette and is covered with pleated Naugahyde with air foam stuffing. At the front is a '58 Impala roof scoop for added attraction.

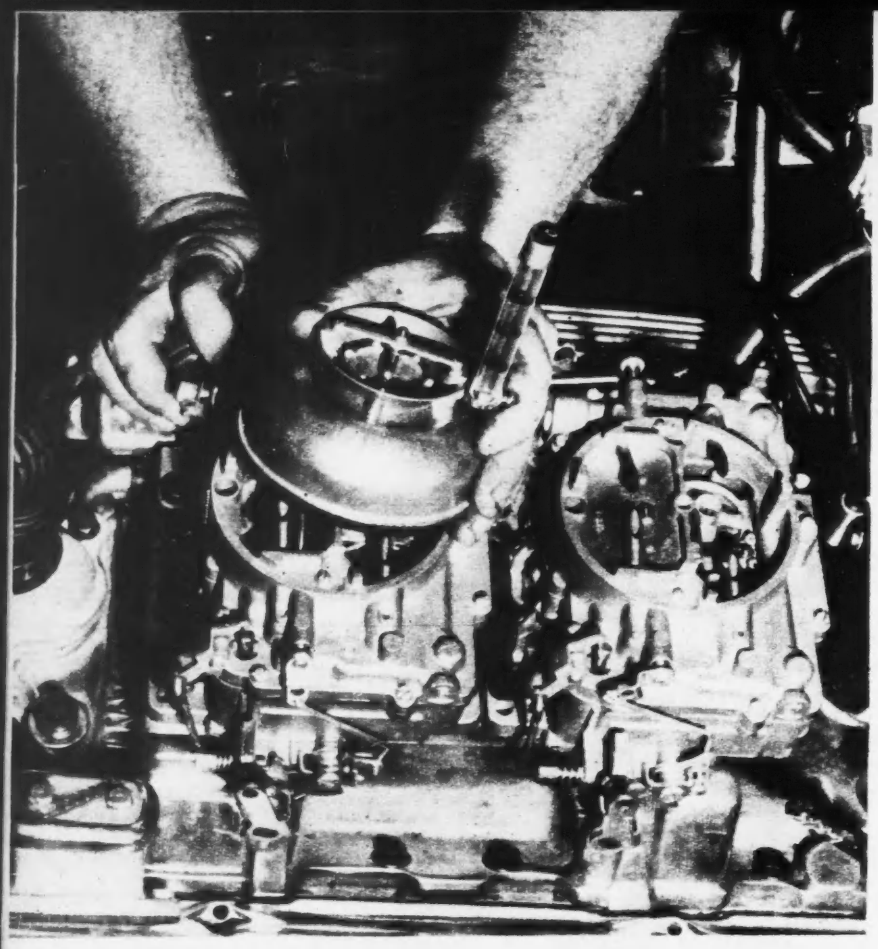


Wood was used to construct special panels that are attached to this '56 'Bird's top. Extension is four inches, while the air foam filled pleats of white Naugahyde are two inch size.

The chopped top on this '51 Merc uses paneled white Naugahyde on sides with double sewn Carson bead and two pleated panels of Maroon Fabrilite inserted lengthwise.

Cotton sheet padding fills this top on a '57 Thunderbird. The Naugahyde is stretched smooth over top with a center square of pleats attached with double thread French seams.





SYNCHRONIZING MULTIPLE CARBS

handy device makes it easy for the amateurs

by John Geraghty

Photos by Al Palacy

THE INSTALLATION OF multiple carburetion is a necessity in obtaining maximum horsepower from any modified engine. Two, three, four, six or eight carburetors can easily be adapted to any late model engine with the use of a well designed manifold available through your local speed shop. Flow checked carburetors with tight throttle bases should be selected along with a good ball bearing throttle linkage kit either progressive or positive. The progressive linkage kits enable you to operate on a single carburetor at low engine speeds. This not only produces improved gas mileage but also helps low rpm performance.

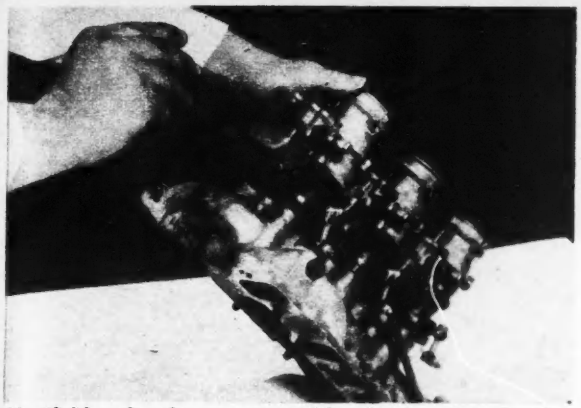
The well designed intake manifold, smooth operating throttle linkage and razor sharp carburetors are still not enough to assure an efficient operating multiple carburetor system.

Carburetors are designed to distribute an exact amount of fuel in ratio with the volume of air passing through the venturi and throttle bore areas of the carburetor body. To assure proper fuel distribution, each carburetor must operate under the same conditions. Synchronizing the carburetor by adjusting the throttle linkage under either full or closed throttle position will not mean each carburetor is drawing the same volume of air in idle position. The varying clearance in throttle shafts and butterflies allow different amounts of air to pass through the throttle bases under the same settings.

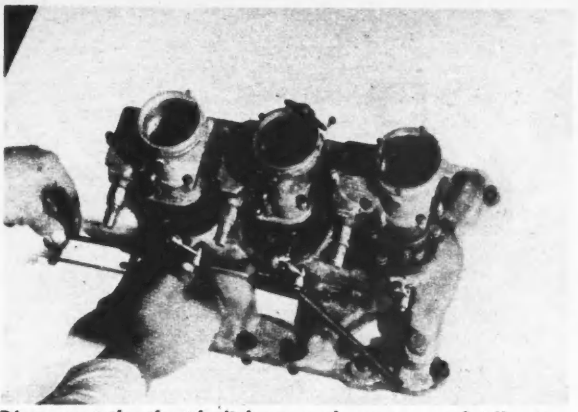
Foreign car mechanics have been faced with the problem of dual carburetor balance for years. Their accepted procedure for synchronization is to use a short section of rubber hose as a stethoscope. One end is placed at either carburetor air intake and the opposite end against their ear. The sound of the inrushing air determines the balance point between each carburetor.

American production cars use a more exact method of carburetor balance which started with the first four-barrel carburetors. The primary side of the carburetor contains all circuits, idle, accelerator pump, choke, and main metering system. The secondary side which is actually another carburetor contains only a main metering system. This eliminates the idle balance problem and insures a smooth operating system throughout the entire horsepower range. General Motors started producing a three carburetor manifold a few years ago which operates in a similar manner as the four-barrel units. The center carburetor contains the only idle system and until approximately ⅔rds throttle each of the end carburetors is inactive. This system also prevents improper throttle settings and erratic idle.

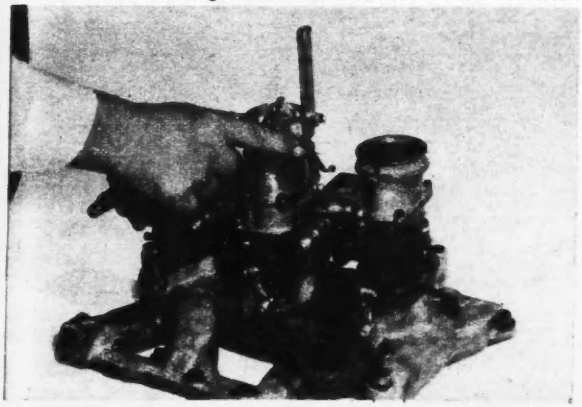
The method recommended for setting your multiple carburetion system has been made simple and exact by Willy's Carburetor and Ignition Laboratories of Blue Island, Illinois, developers of the Uni-Syn. This device is adaptable to almost any carburetor and assures perfect carburetion balance. The Uni-Syn is equipped with a graduated tube which contains a sliding vacuum operated piston that measures the exact amount of air



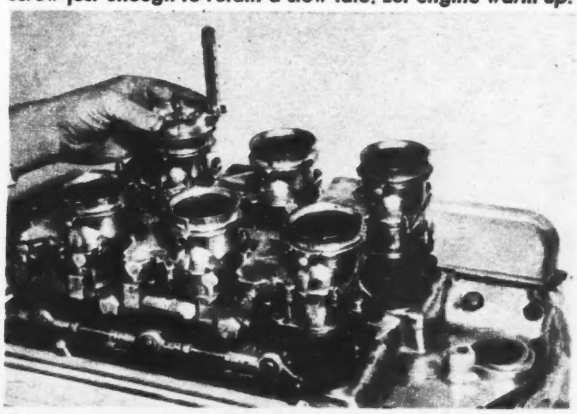
Manifold and carbs are removed for showing. Actual tuning is done while on engine. Set idle air screws at 1 ¼ turns.



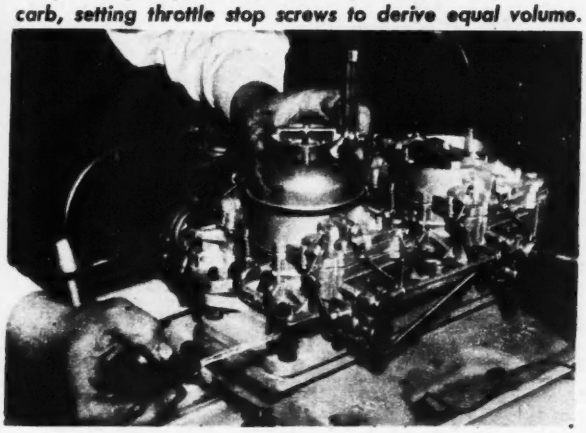
Disconnect the throttle linkage and engage each idle stop screw just enough to retain a slow idle. Let engine warm up.



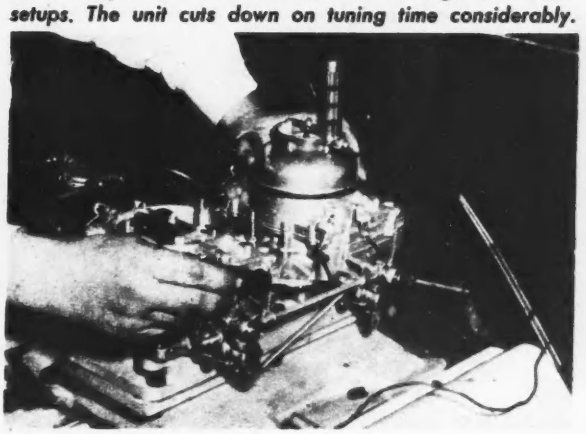
At operating temperature, the Uni-Syn is moved from carb to carb, setting throttle stop screws to derive equal volume.



The same procedure is followed for six or eight carburetor setups. The unit cuts down on tuning time considerably.



The Uni-Syn four-barrel unit is adaptable to most late model carburetors to produce smooth performing dual carb system.

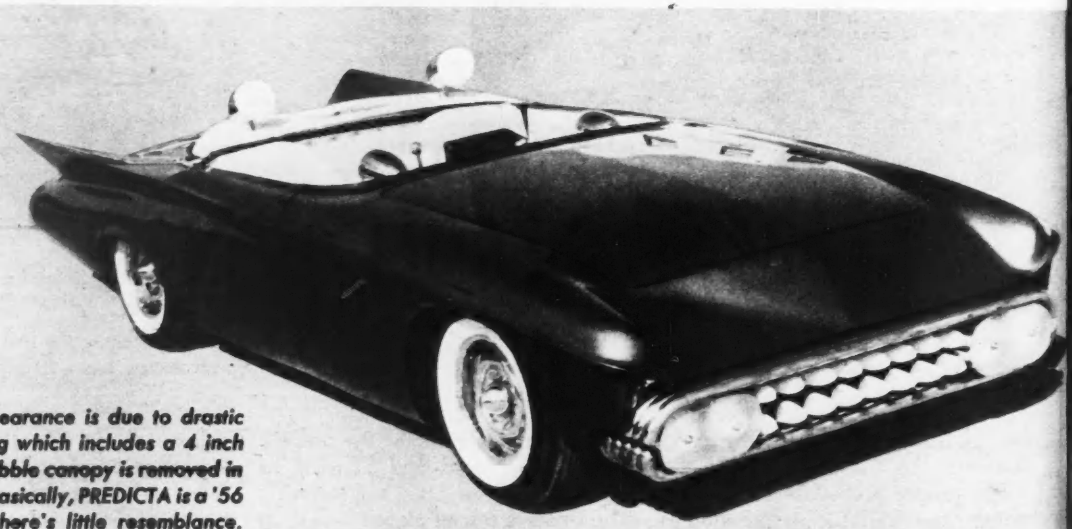


The photos at left and above show the unit being used to tune a dual four-barrel setup. Note throttle stop screws.

moving through a venturi restriction built into the Uni-Syn throat.

The proper procedure in synchronizing your multiple carburetion is to first check all manifold and carburetor base bolts for tightness to assure a good seal and prevent any vacuum leaks. With all throttle linkage disconnected, all idle air screws opened approximately 1¼ turns, and all throttle valves closed, the engine should be started and allowed to reach normal operating temperature. The Uni-Syn can be placed over each carburetor throat and a note taken on the volume of air drawn by each carburetor. By placing the Uni-Syn on each carburetor the throttle valve stop screw can be adjusted until each carburetor is drawing the same volume of air. The throttle linkage may then be placed on each carburetor and secured in place, producing a perfectly synchronized multiple carburetion system in a minimum of time. This tune-up tip will produce a smooth operating engine free of the normal rough idle and low speed loading conditions associated with multiple carburetion.

"Predicta"



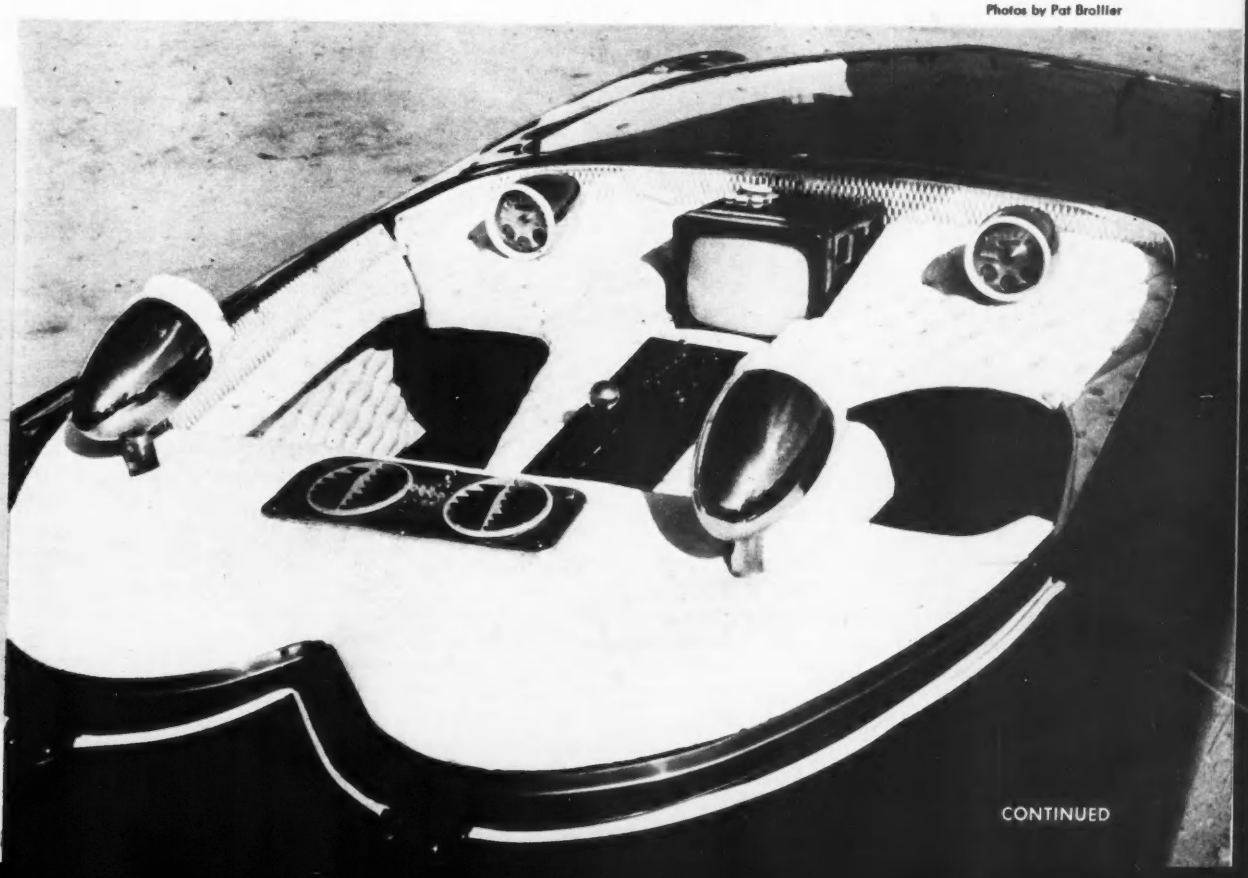
Long, low appearance is due to drastic body reworking which includes a 4 inch channel job. Bubble canopy is removed in these photos. Basically, PREDICTA is a '56 Thunderbird. There's little resemblance.

Our cover car for August, this is PREDICTA, the winner of the Oakland Roadster Show's "Car Of The Future" award — a much sought trophy. Only 11 weeks were consumed in construction.

Powering Darryl Starbird's fantastic custom is a 354 cubic inch '57 Chrysler engine with Hilborn fuel injection, complete chrome plating. Mill is mounted far arear of normal position.

Tufted white Polomar is studded with nearly 1000 rhinestones. Handformed dash has two instrument clusters, individual seating and a TV. Car is dual control with 'stick' steering.

Photos by Pat Brollier



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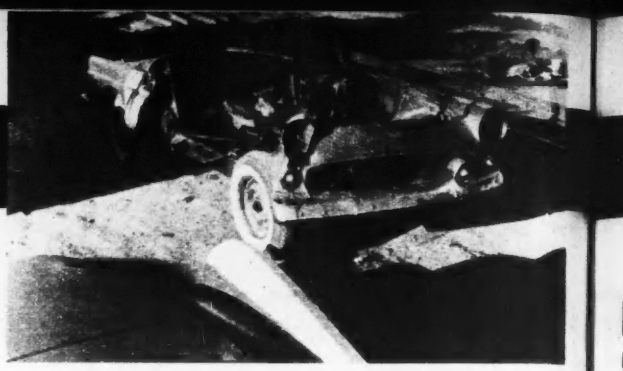
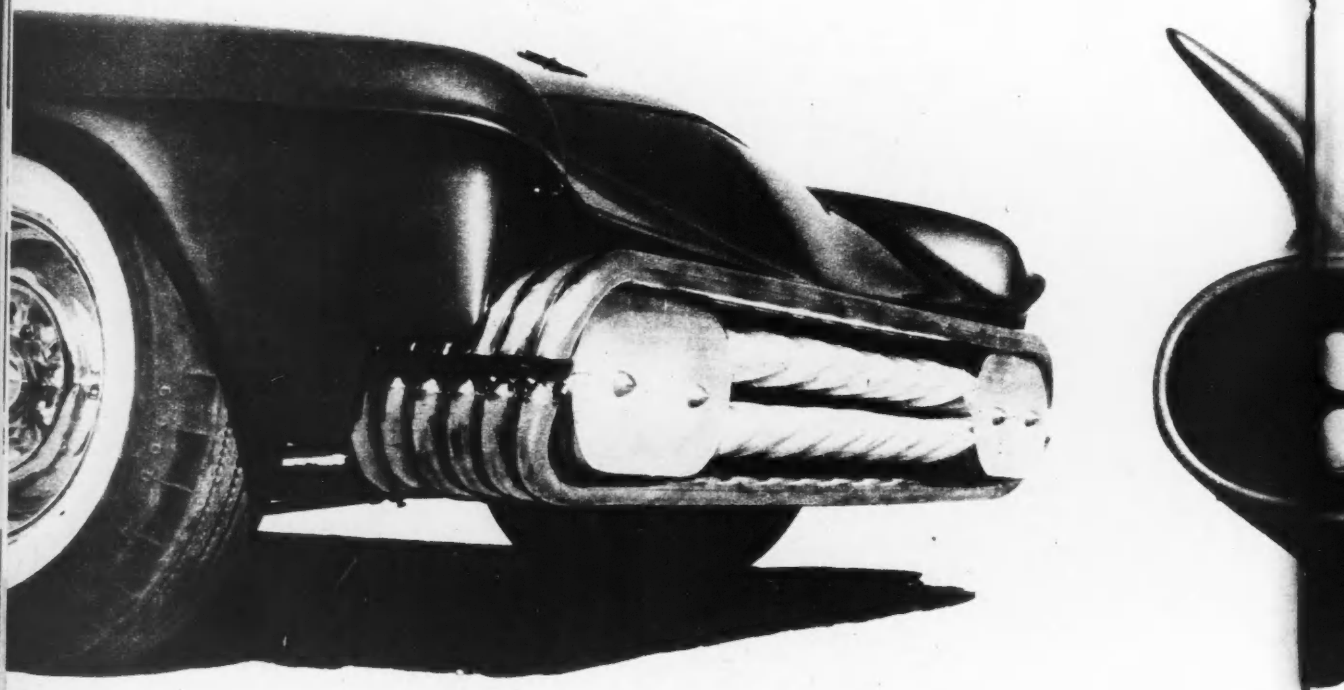




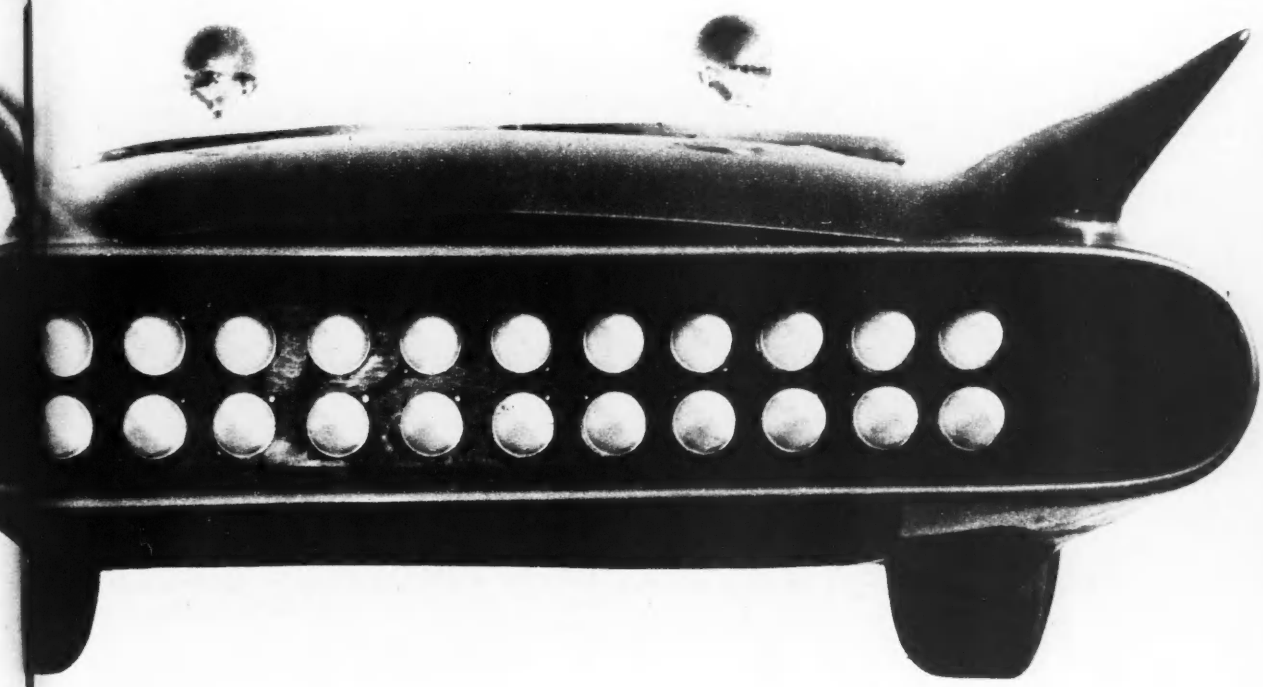
Front end reflects the latest custom trends. The major grille component is a group of '59 Cadillac taillights that are now white coated. The surrounding frame is 1½" exhaust tubing with bullet caps. Headlights are covered with Lucite panel.

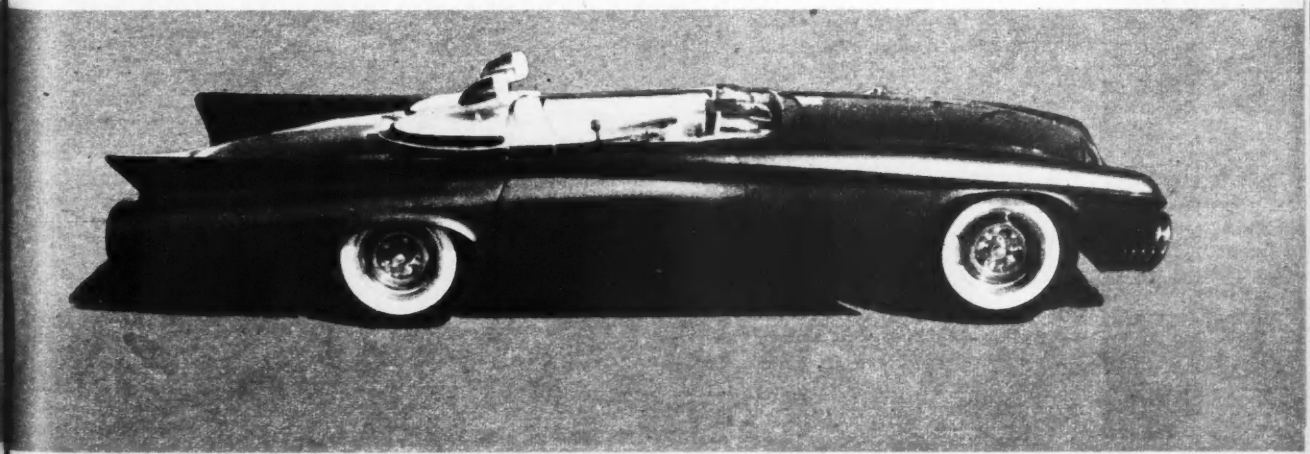
The line of the Buick fin is carried the entire length of PREDICTA to the front. The seam is contoured, handmade and plays an integral part with front-end styling. Both wheel wells are reshaped and have been flared to correspond.

Ground-level shot reveals 28 Cad lenses, 22 coated white and 6 serving as stop and taillights. They're recessed within a handmade oval frame. Jutting sharply to either side directly above rear grille are '59 Buick fins that form rear quarters.

Painted Satellite Blue Lacquer, car has no windshield when hydraulically operated top is removed. The canopy pivots upward from entrance; both doors have electric solenoid controls and are synchronized to open when top is operated.

Not much of a foundation for Starbird's dream custom, but this is what he started with — a completely totaled and gutted hulk of metal that was once a 'Bird. In photo here, the work has only started. Most of wrecked parts are removed and sheet metal paneling is beginning to form grille shell.





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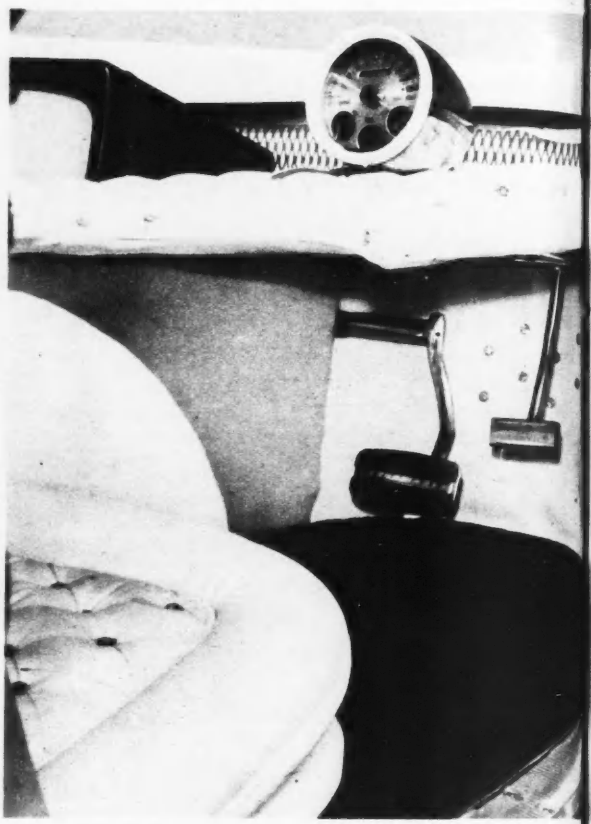
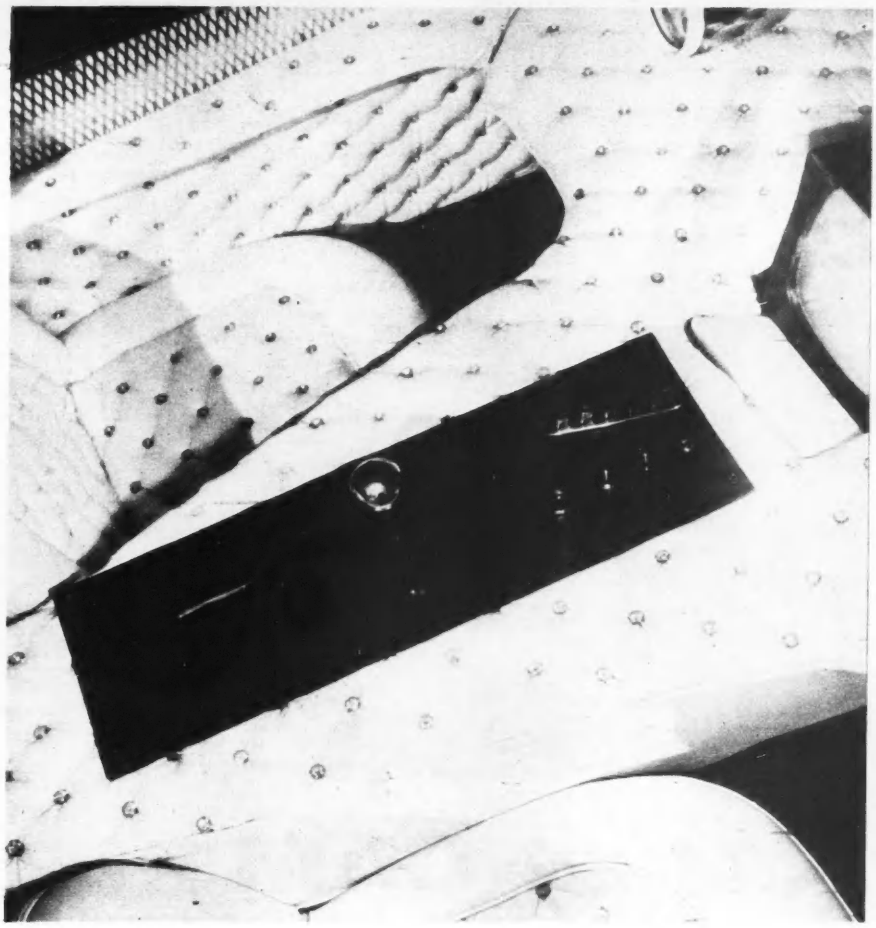


Each side of cockpit has pedal set-up which leads to central master system for accelerator and brake. Pedals are again handformed of stock, exhibit expert workmanship befitting the best Detroit dreamcar. Carpeting is carried out in red.

18 gauge sheet metal was used to form new flooring and transmission hump. Firewall is made of 3/16" steel and is now chromed. All inner fender panels were handformed to new bends necessitated by the engine mounting. Special crossmembers were built to allow Chrysler engine and trans installation. Frame is filled and has several coats of lacquer. Rear end is T-Bird; steering gear is a combo of Ford and Chrysler assemblies, all power assisted and reworked to permit center-mounted 'stick' steering.

Twenty-six year old creater of PREDICTA, Darryl Starbird of Star Kustom Shop in Wichita, Kansas towers over his dream-custom. Darryl told us that: "I built and designed the car with only one thing in mind. I didn't want just another custom, I was after a dream car of the future that even Detroit would take notice of." Car Craft believes he reached this



Here's the master control panel for steering and gear selection. A push-button '57 Chrysler sending unit is mounted just ahead of steering control. The unusual steering is controlled by pushing stick forward for left turns, back for right and centered for straight ahead work. The system is easy to master and soon becomes as natural as present day wheels.

Racing CAM CONVERSIONS

By John Geraghty

CAMSHAFT ARTICLES normally begin and end with a series of involved theoretical formulas dealing with basic physics and valve train harmonics confusing a large portion of readers and leaving enough unanswered questions to write a volume on the subject.

We feel that proper coverage of each reader's individual camshaft needs would require more than our alloted space and can be answered quicker and more specifically by either the staff of any leading camshaft manufacturer or this technical editor by dropping a card in the mail stating all engine modifications, chassis type, weight and gear ratios, explaining the desired function (street, lakes, drags, etc.).

This article is directed to the performance minded automobile enthusiasts that have entertained the thought of a high performance camshaft installation. Often after pricing the camshaft assembly, labor, gaskets and seals the total investment is higher than originally anticipated and the camshaft installation is substituted by some inferior modification.

The step by step photo story and contents of this article will make the do-it-yourself camshaft installation a simple operation, reducing overall costs and making it possible for many of our readers to enjoy the benefits derived from proper valve timing.

The Ford 292 cubic inch engine was selected to undergo the camshaft installation mainly because it presents all the normal modifications encountered, plus many more of its own.

Because of the complete specification data supplied by Iskenderian with each camshaft and kit assembly we selected one of his cast billet flat tappet grinds for this particular installation. Installation procedures for the roller tappets and ultra rev kits will also be discussed in detail.

After obtaining the proper camshaft and kit assembly for your particular need the installation procedure may begin.

STEP #1

Removing the radiator hoses, radiator, and fan assembly is our first operation. This allows the water to drain from the upper portion of the engine block, provides the necessary room to remove the camshaft and adequate accessibility necessary to all remaining engine parts.

STEP #2

The design of Ford's timing chain cover and the necessity of removing the valve lifters from below requires the oil pan to be removed. All other engines need only the pan bolts loosened enough to allow removal of the timing gear cover without damage to the front pan oil seal. A special puller will be necessary to remove the lower crank pulley (one can usually be borrowed from a neighborhood garage).

STEP #3

After removal of the oil pan and front timing gear cover the engine should be cranked over until the timing marks on the sprockets or gears are positioned as shown in the illustration. Remove the camshaft sprocket capscrews and lock washers then slide the sprockets and chain forward. Upon reassembly be sure the timing marks are positioned properly.

STEP #4

Remove intake manifold, carburetor and ignition coil as an assembly. Remove distributor cap and scribe a line on the distributor housing in relation to the rotor position and cylinder block to distributor base to assure proper reassembly,

then remove distributor. Remove rocker covers and push rod chamber cover.

STEP #5

Before removing the rocker arm assemblies and push rods it is always good practice to back off each valve adjustment approximately two full turns. This will prevent damage to the push rods upon reassembly. After removing both rocker shafts and all push rods the lifters may be removed. Many Ford engines have a mushroom type valve lifter (a lifter that is flat and of a larger diameter at the base than on the sides). This requires the lifters to be removed and installed from below. In order to remove these lifters they must be raised high as possible to clear the camshaft lobes and held in position with regular household clothespins as shown in the photo story. All other lifter types may be removed from the top with a magnet or pair of pliers.

STEP #6

Removal of the fuel pump will now allow the camshaft to be lifted from the engine block. Care must be taken not to scrape the soft babbitted bearings with the camshaft lobes while pulling it forward out of the engine. If the camshaft is designed to operate with stock valve springs no further modifications will be necessary.

STEP #7

Remove both exhaust manifolds, disconnect battery ground cable and any other engine accessories to allow access to all cylinder head bolts (generator, oil level dip-stick, temperature sending unit, etc.) Remove the cylinder head bolts and lift both heads from the engine.

STEP #8

With the cylinder heads removed, use a suitable valve spring compressor to compress each spring. Remove the valve locks and retainers. Remove the neoprene oil seal from the valve stem and release the pressure on the spring. Remove the spring compressor and lift off the valve retainer, spring and valve. Repeat the same process for the remaining valves.

Keep the valves and pieces to be re-used together, so that they may be reinstalled in their respective positions if found in satisfactory condition.

STEP #9

Clean the combustion chambers and valves with a wire brush being sure that all deposits and gum are removed. Inspect the valves seats and faces for cracks, burns, pits, ridges, or improper angle. During any valve disassembly it is advisable to reface the valve seats and faces regardless of their condition. This can be done by any local garage at a very nominal fee. If the engine has very low mileage, valve lapping compound may be applied to the valve faces and rotated on their respective seats assuring a proper seal.

STEP #10

Upon reassembly of the cylinder heads a specific valve spring tension must be retained on each valve to assure high rpm without bounce or float. This can be accomplished by following the recommended procedure shown in the literature furnished with each camshaft. A given spring length is shown which provides the proper tension. This length can be reached by installing spacers under each valve spring as shown in the photo story (spacers are furnished with each camshaft kit).

STEP #11

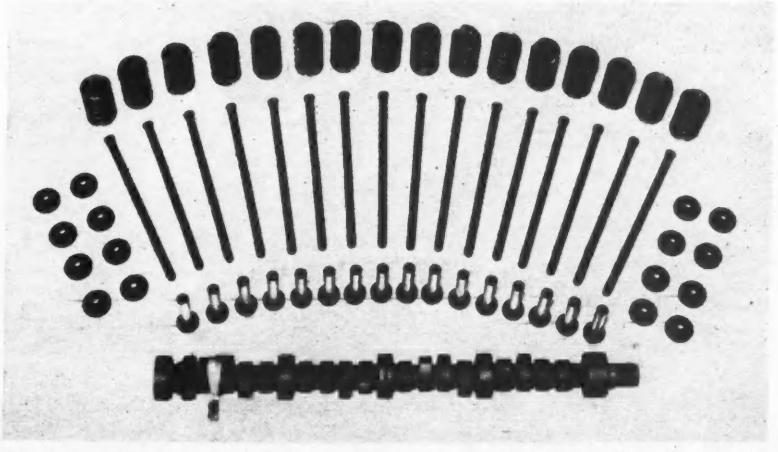
Before installing the cylinder heads a coating should be applied to each head gasket. The pressed metal shim type gasket should be sprayed on each side with aluminum paint and installed while still wet. The asbestos center gasket should be soaked in water then coated with a thin layer of gasket cement. We recommended GM high compression sealer which may be purchased from any Oldsmobile dealer.

STEP #12

After replacing both cylinder heads the bolts should be tightened in sequence beginning in the center and working toward each end in order, beginning with approximately fifty foot pounds of torque and progressing to the recommended pressure using at least three steps.

STEP #13

A cold valve adjustment must be made before attempting to start the engine. We recommend the setting for operating temperature be used adding .003 to the exhaust settings and .002 on intake settings, this allows for normal heat expansion. After warming up the engine, the valves may be set while running unless adjustable push rods are used. All installation procedures are the same for roller tappet camshafts other than minor individual designs of retaining each lifter in its proper position. These changes are fully covered in every instruction sheet furnished with each camshaft kit. This installation procedure is a very simple operation which has been successfully accomplished by three individual car owners with no mechanical knowledge in a maximum of seven hours.



This is the Iskenderian camshaft and kit used in the installation described in the story. It is the cast billet type and is available in grinds for street or racing.

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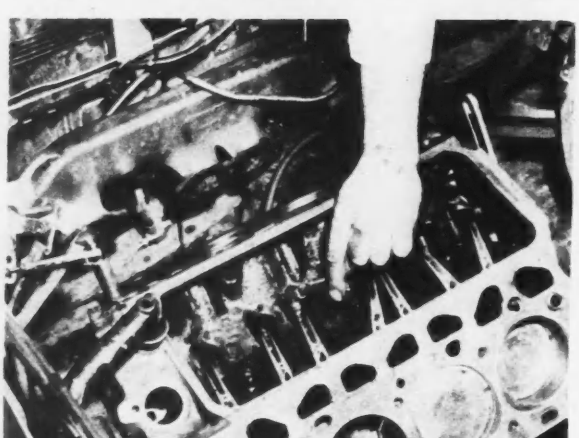
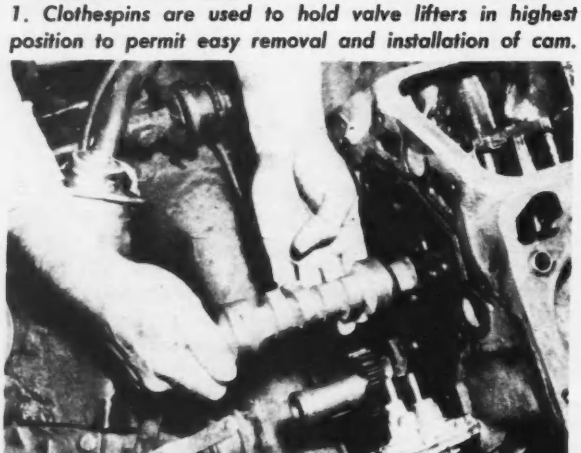
CAM KIT INSTALLATION

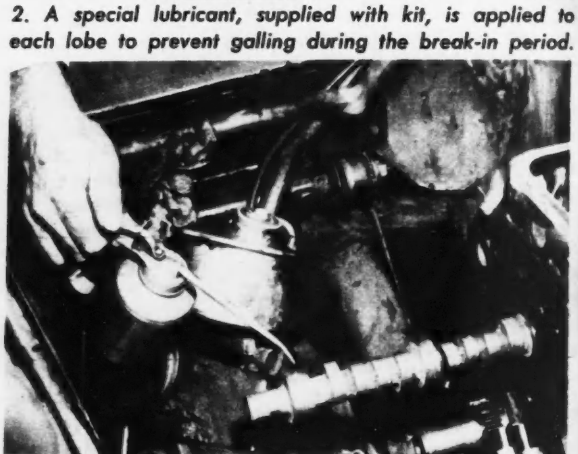


1. Clothespins are used to hold valve lifters in highest position to permit easy removal and installation of cam.

2. A special lubricant, supplied with kit, is applied to each lobe to prevent galling during the break-in period.



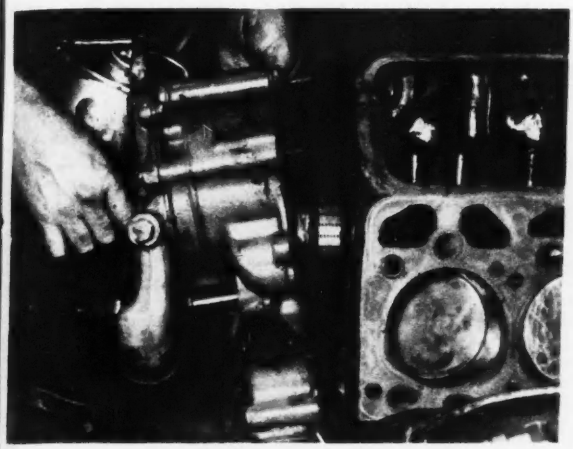
3. Care must be taken not to allow lobes to scrape against soft babbitted bearings during removal/installation of cam.



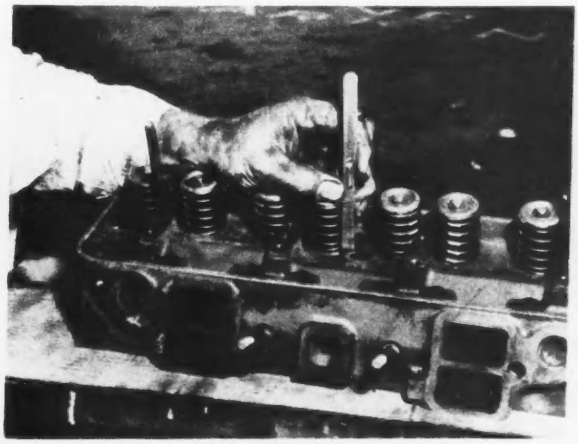
4. Each of the soft babbitted camshaft bearings should be coated with oil to prevent galling when starting engine.

5. Make sure of proper alignment of all timing marks before installing timing chain and sprocket. Damage could result.

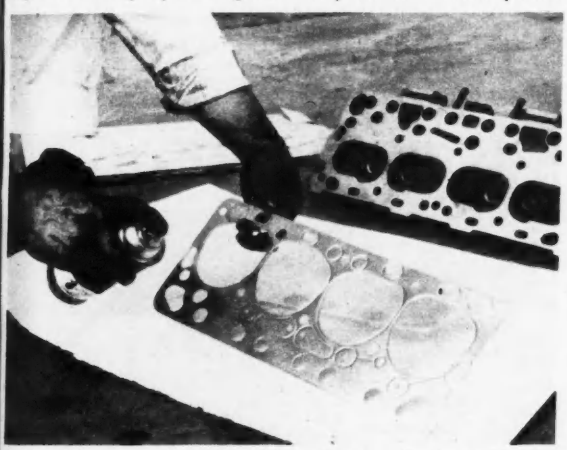
6. Before installing timing cover, all gasket surfaces must be cleaned and a sealant applied to retain gasket and seal.



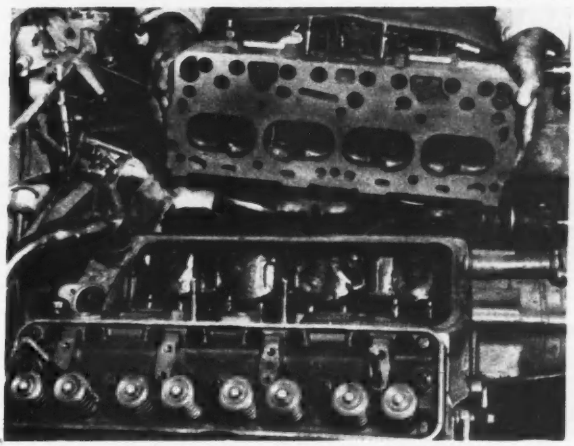
7. Use correct cover bolts in proper location when installing cover. Improper length could push in a water jacket.



8. Specific spring lengths recommended by manufacturer are reached by shims of proper thickness under springs.



9. Metal head gaskets should be coated with aluminum paint before installing; asbestos gaskets can be soaked in water.

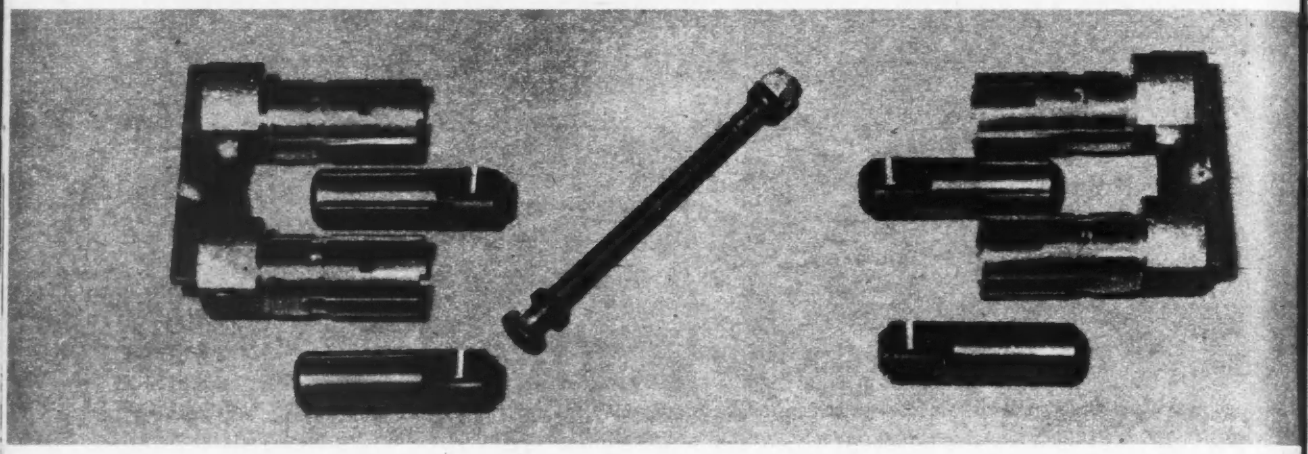


10. Clean cylinder heads and check for warping. Place head gaskets on block faces and place heads in their position.

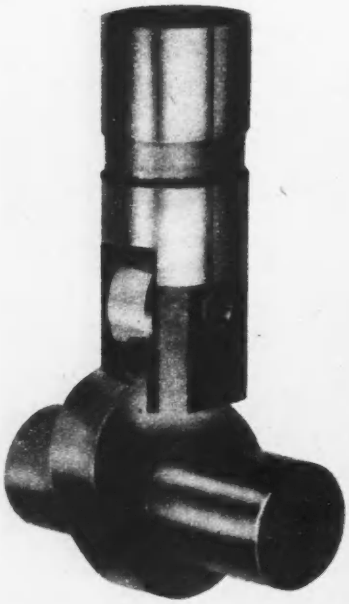
11. Cylinder heads are tightened in sequence starting from center and working out. Tighten to recommended tension.

12. After heads are torqued properly, install both rocker shaft assemblies and adjust as recommended in step 13.

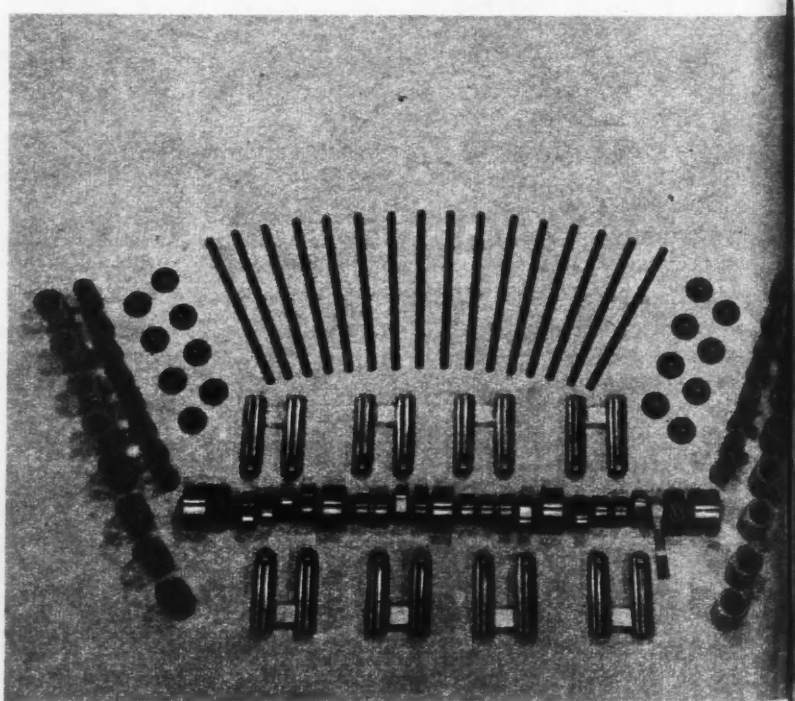
ROLLER KITS



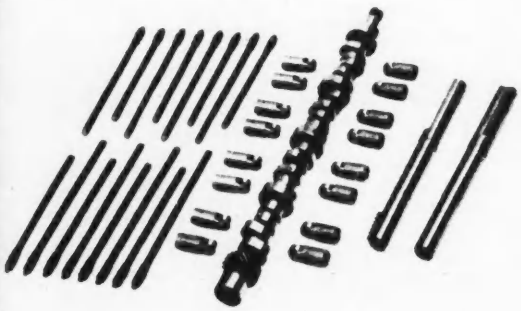
The Harmon & Collins lifter assemblies are held in position by complete guide assemblies as shown above. The guide units slip into each lifter boss and are retained by a cross shaft. Complete kits available for most popular late model engines.



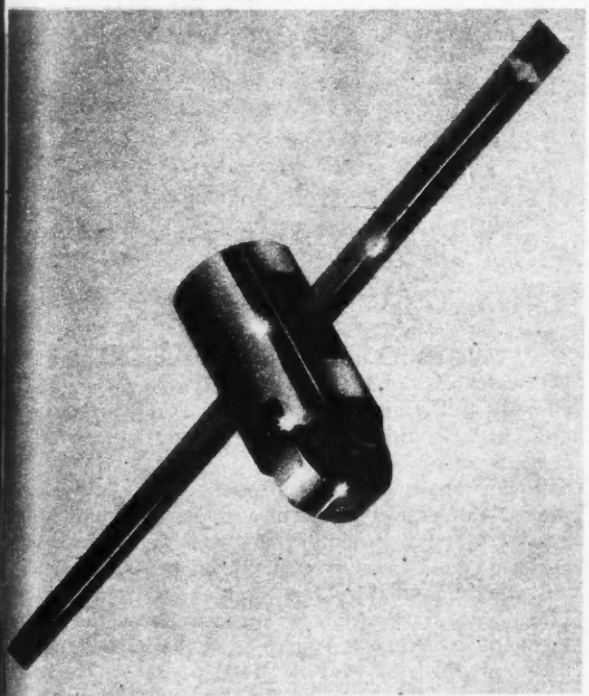
Racer Brown, of Camshaft Engineering Co., is one of the leading camshaft designers. They have a wide range of high performance roller cam assemblies. The simple method of retaining the lifters in position can be seen in photo.



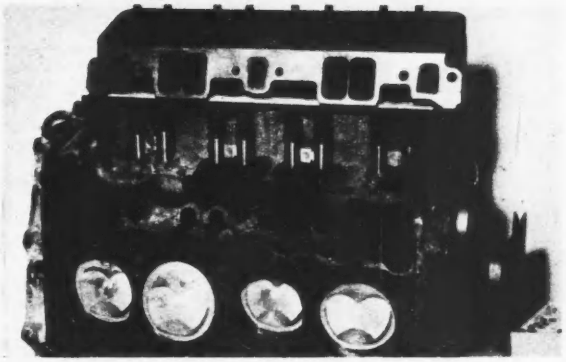
Complete Iskenderian engineered kits are available for every type of use, whether for street or full competition. Each pair of lifters has special alloy male and female flanges which interlock to prevent rotation. All assemblies are guaranteed.



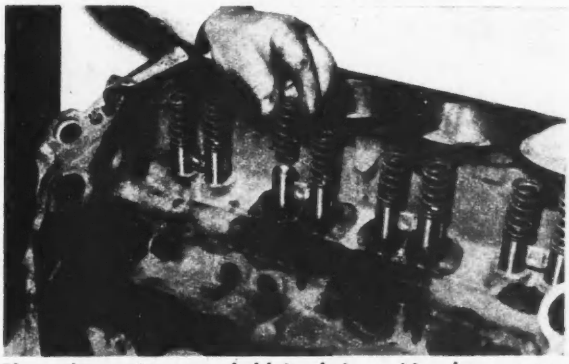
The Weber cam and kit features a comparatively light valve train mechanism capable of high engine rpm without extreme valve spring tension. Special tools (in above photo) are used to broach each tappet boss, allowing a retaining wire to be retained between broached area in block and the lifter assembly to prevent the roller from revolving.



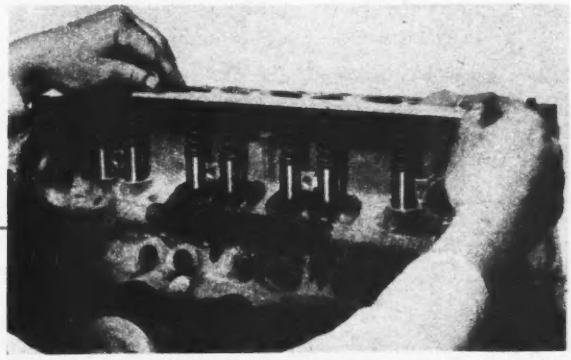
Chet Herbert roller kits have two methods of preventing tappets from revolving. A steel rod attached to the valley chamber, clears each lifter boss by 1/32 of an inch. Chevy V8 tappets have a machined slot in each lifter body; a rod inserted through the oil gallery prevents units turning.



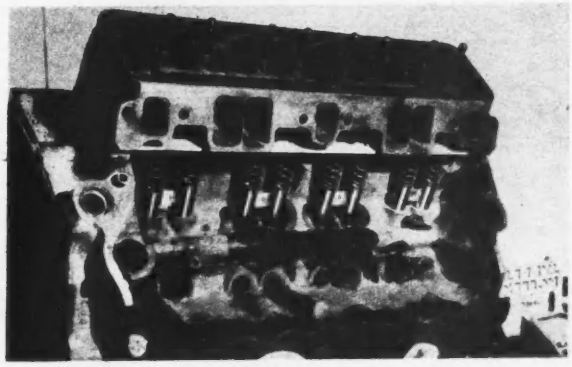
Iskenderian ultra-rev kit allows additional 2000 rpm from most engines due to extra tension gained from 16 springs.



The valve springs are held in their position by a recess that's machined into the upper portion of the roller lifters.

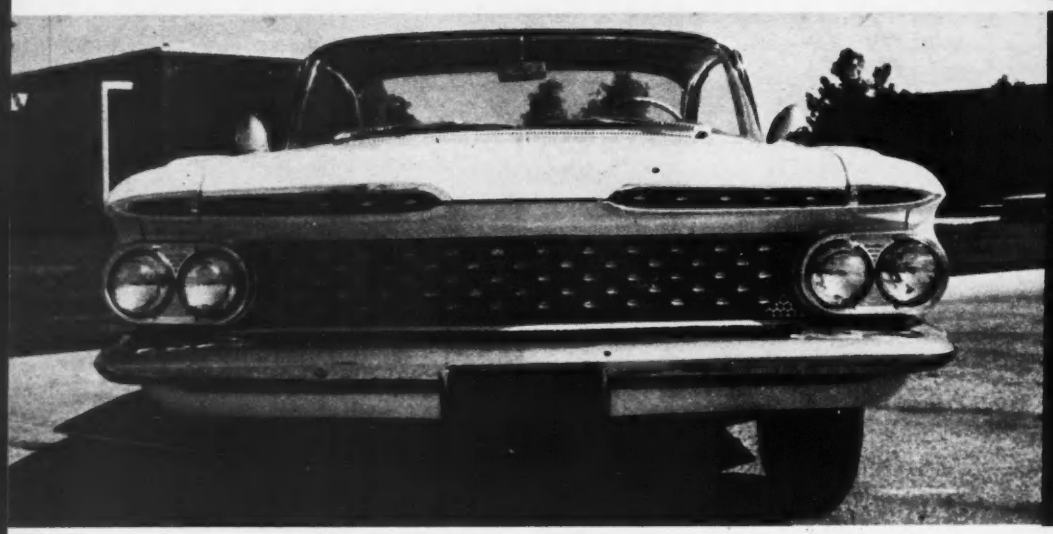


Cast aluminum plates are employed to position the valve spring and assure even tension on each of the roller tappets.



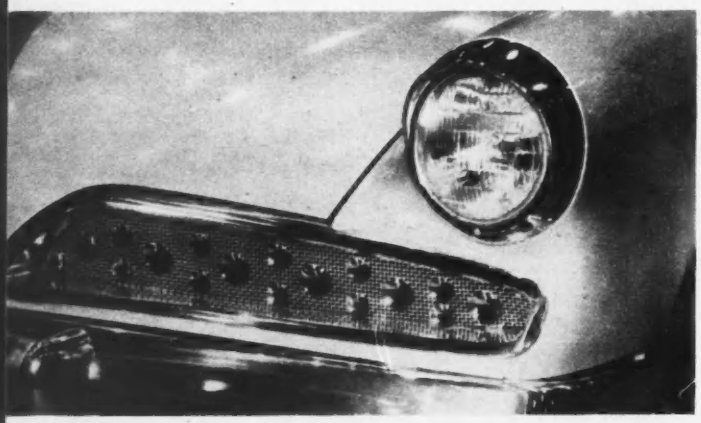
With springs and aluminum plates in place, the heads are installed. Tightening heads produces tension for added revs.

Photos by George Barris



here's how:

Garnished grillework gives fresh appearance to any car



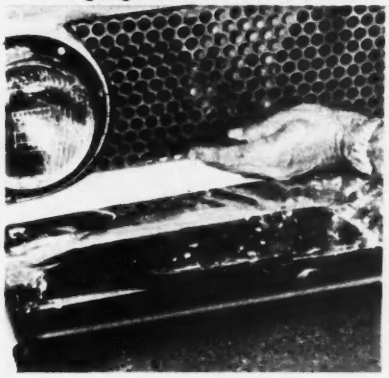
CUSTOM GRILLES ADORNED with kitchen hardware offer unlimited possibilities to the restyler, allowing full reign as to combinations of knobs, mesh grille backings, plastic accessories, etc. Automobiles of every description are ideal material for restyling, the hardware knobs knowing no boundaries, and utilized discriminately always present a glamorous front. Mesh grille backing is generally most suitable for use with hardware knobs and is available in generous pattern designs and materials. The mesh can be chromed or brass plated, conforming with the finish on the knobs or handles; better yet, it may be of the opposite treatment, giving a pleasing contrast in design. However they are used, it is a sure-fire bet that the resulting change will be for the better, and at a reasonable cost.

1. After removing stock grille from cavity, make cardboard grille template.

2. Transfer pattern to ⅛" staggered hole 18 gauge cold rolled metal mesh.

3. With shears, cut out mesh grille material following pattern contours.

4. Bend completed mesh grille in the center so it will follow shell contour.

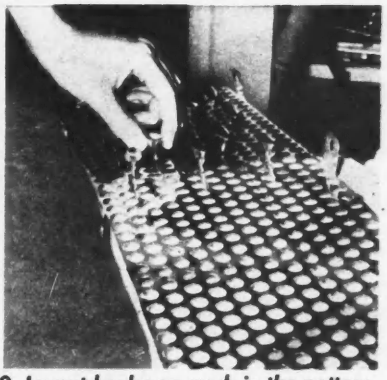


5. Fit mesh into grille cavity, mark spots for attaching fastening straps.

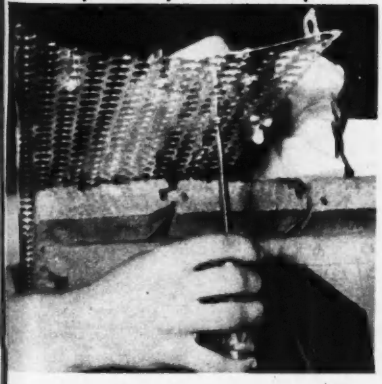
6. Cut 1" metal straps for fastening grille mesh to the grille cavity pans.

7. Braze the attaching tabs to grille mesh at previously determined places.

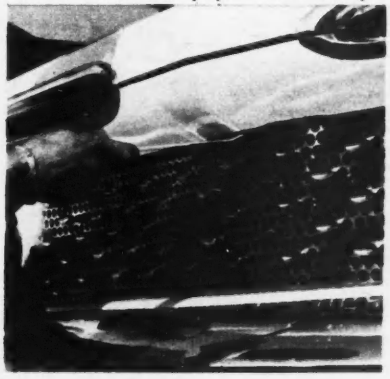
8. Having drilled tabs, replace grille, drill holes in cavity pans identically.



9. Layout knobs on mesh in the pattern of your choice, follow lines of holes.

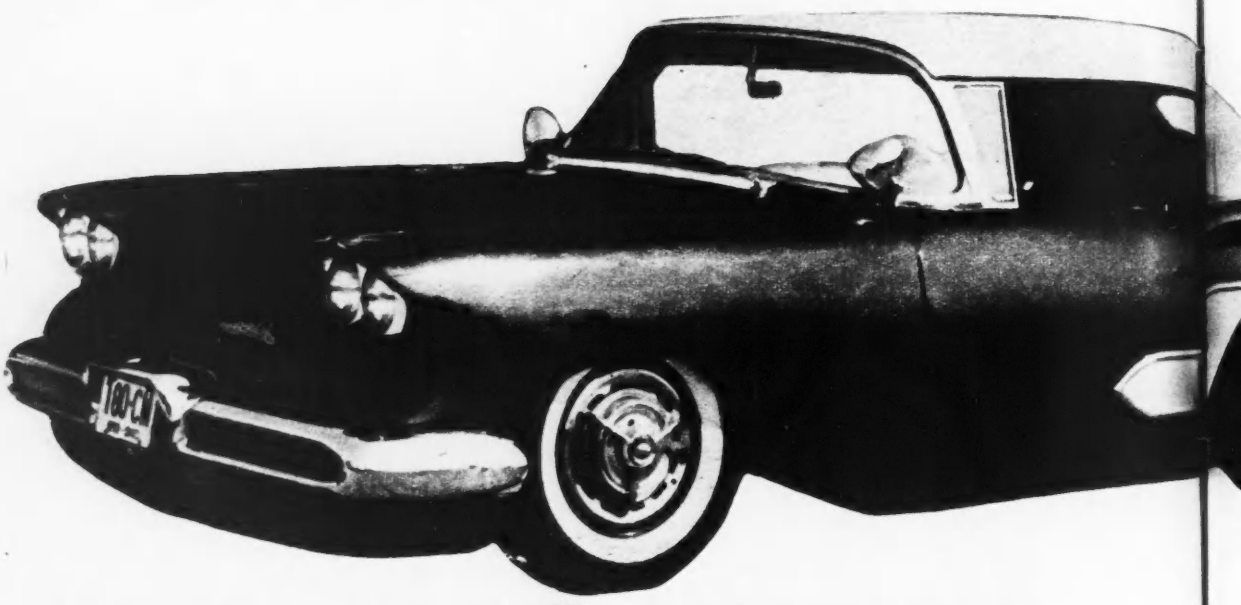


10. Small ¼" machine screws and flat washers are used to attach the knobs.



11. Hook made from ¼" round rod is used to trip hood latch arm behind mesh.

12. Finished knob-mesh combo gives a striking appearance, true custom look.



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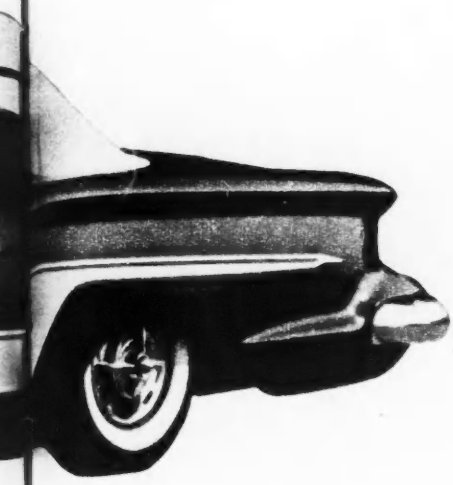
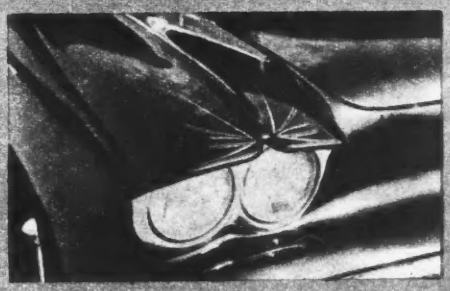
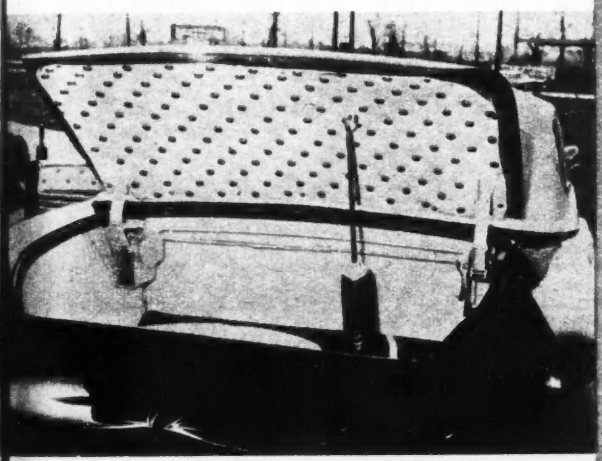




Extended four inches, front fenders have special hood with notched center. Work on Chuck Miller and Dixie Wolfe's '58 Impala was done by Johnson's Body Shop, Columbus, Ohio.

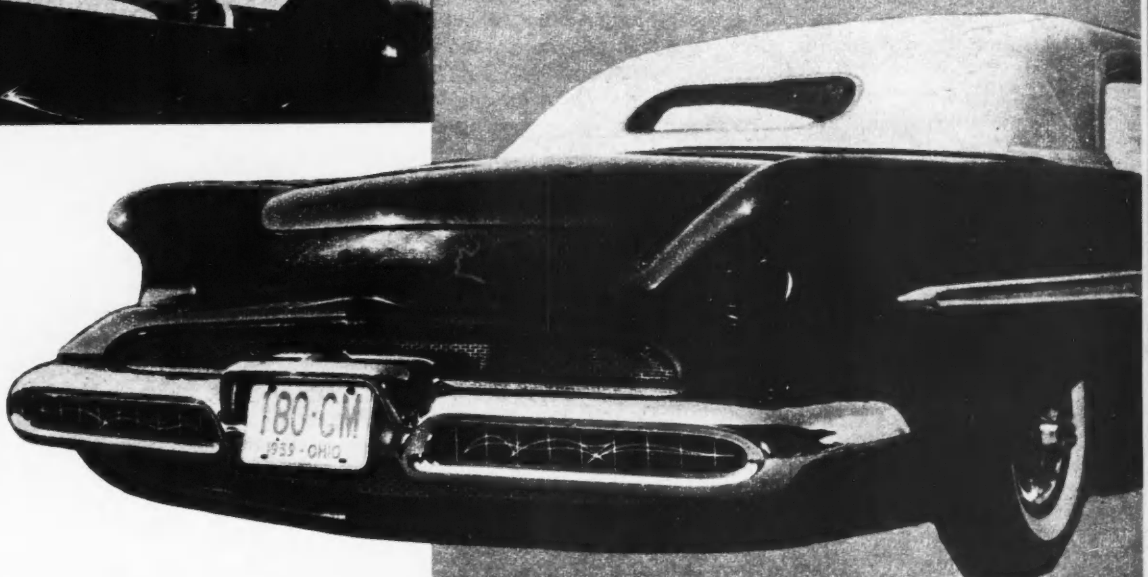
Mild top chop of two inches is deceiving. Purple translucent color is applied, fluted aluminum panel framed by chrome trim pieces corresponds to extended rear fender contours.

Both hood and trunk lid are pancake style. Deck lifts to expose upholstered compartment stitched by owner and Vern's Custom Shop in Columbus, in lavender and white.



Bumper/grille combination of '59 DeSoto bar with '57 Olds license guard separates molded grille shell and pan. Backing is mesh screen. Upper grille pan is molded into lower hood.

A similar rear grille was constructed using the same materials. The entire rear end is molded and new taillights are long, thin plastic lenses constructed integral with bumper.



Photos by Bob Hegge

LIVE AXLE KITS

Easy to install kits give tops in traction and handling

by Bud Lang

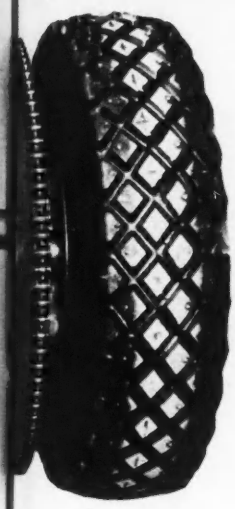
MOST KARTS SOLD today are generally purchased with the sole thought of having a heap of fun, driving around the nearby vacant lot or some other unoccupied area. Still, wherever a group of these karts get together, competition, even in its stockest form, will be the end result. Sooner or later these karting enthusiasts will find their way to the nearest kart racing course and engage in some hot competition, twisting through left and right hand turns.

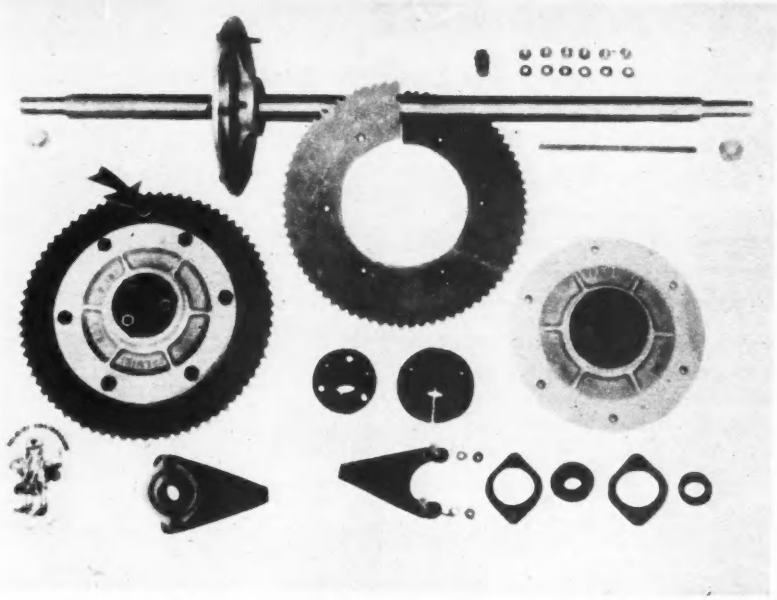
In the early days of karting most models came equipped with a dead axle, the engine driving only one wheel. Even today quite a few manufacturers are still producing dead axle vehicles. These set-ups are quite suitable for the stockers in classes "A" and "B" but hook up one or two of the hotter mills or run a single "C" engine, and that one lonesome slick just doesn't seem to get enough traction anymore. To meet the challenge of hot competition racing, with either stock or modified engines, designers are busy producing a variety of live axle equipped karts, giving that needed traction and stability by driving both rear wheels.

There are thousands of owners running karts today with dead axles who would like to use a live axle to take advantage of its offerings but can't afford or have no desire to part with their present kart. With these owners in mind, some of the leading kart part manufacturers are now producing live axle kits that may be installed on just about any kart made in a matter of minutes. A run-down of kits available is presented here along with a series of how-to-do-it photos showing the installation of one of these kits onto a dead axle equipped kart. A majority of these axles come with flanges attached to the bearing retainers, necessitating welding these flanges to the kart frame. This leaves the former dead axle in stock position used as a frame member. A few axles are enclosed in a light-weight tube allowing the dead axle to be removed completely. This new axle tube is rewelded in its place to serve as an integral part of the frame and axle housing.

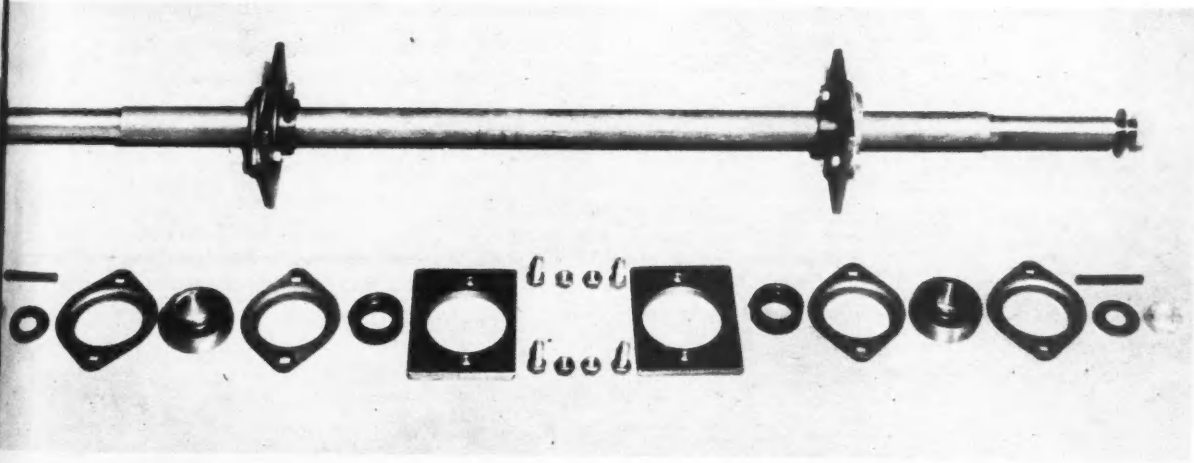
There are a couple of models that allow a purchaser to simply bolt the axle kit to the frame rails or small flanges. This setup should prove ideal on the many karts running square tube chassis as the owner would have to only drill the mounting holes, no welding necessary. It should be stressed that in all installations the new axle should be carefully aligned with the frame for proper handling and engine mounting.

In conclusion it seems safe to say that these live axle kits are one of the most needed accessory items to come along in some time. They offer karters a chance to bring their karts up to date, in keeping with the more advanced engines available in the karting world.

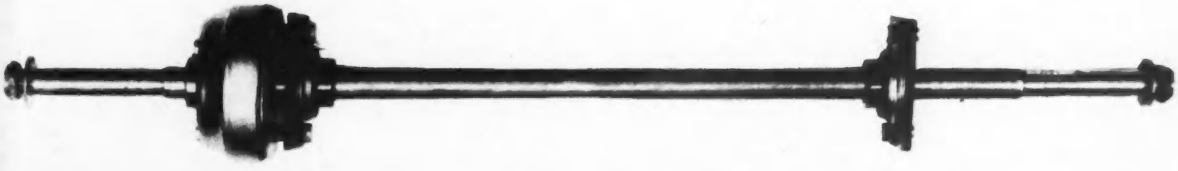




The new live axle kit offered by Palmini Engineering features a one-inch machined steel axle shaft 36" long offering a 32½" tread width. Double retaining flanges mounted in frame hanger brackets afford easy installation of unit to kart frame. New taper lock hubs, split sprockets are other Palmini offerings in this axle kit.



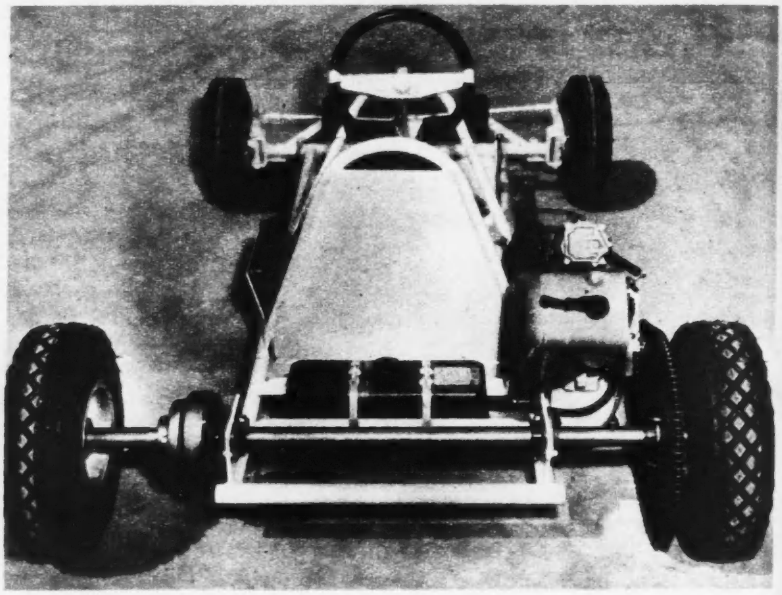
Reed Engineering is manufacturing two live axle kits, this one uses a one-inch axle, 32½" tread width available, and is keyed for wheels. Fafnir self-aligning bearings, brackets, are secured to plates with bolts, plates then welded to kart.



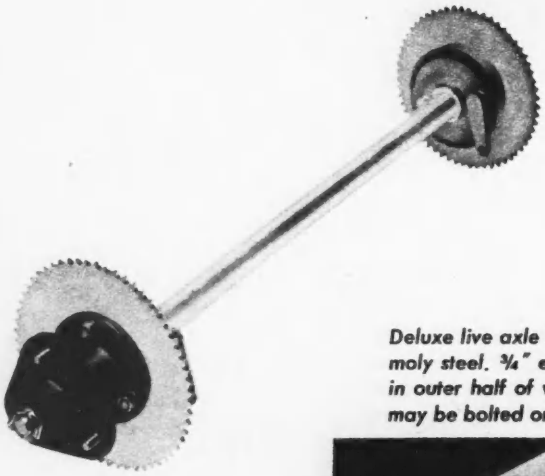
Converting your dead axle kart is easy with the kit offered by Flexo Products. This 32½" tread width axle is machined from one-inch stock. Fafnir self-aligning bearings and plates are heavy duty. Internal expanding brake available.

CONTINUED

LIVE AXLE KITS

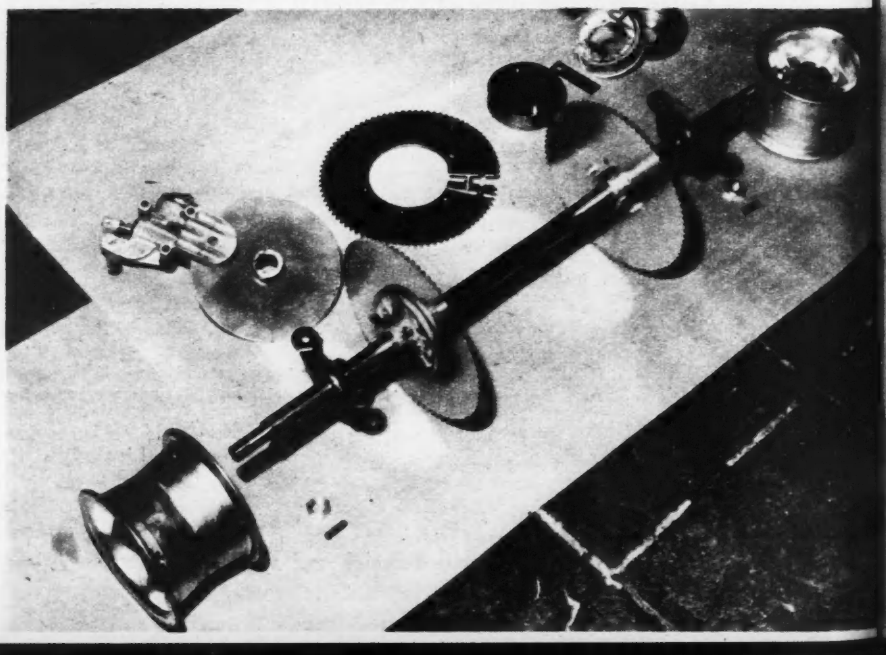


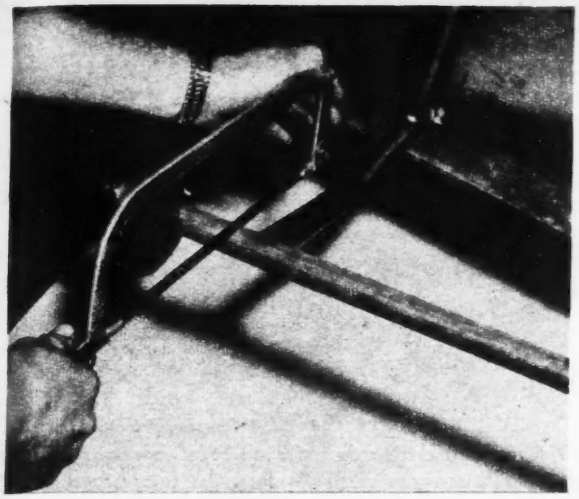
Outdated kart has been fitted with open type live axle typical of many being offered today. Mounting of this type axle is a simple chore, bearing plates are arc welded to frame rails, dead axle end cut off leaving the center as part of the frame. Chassis rides lower since new axle is situated over rails.



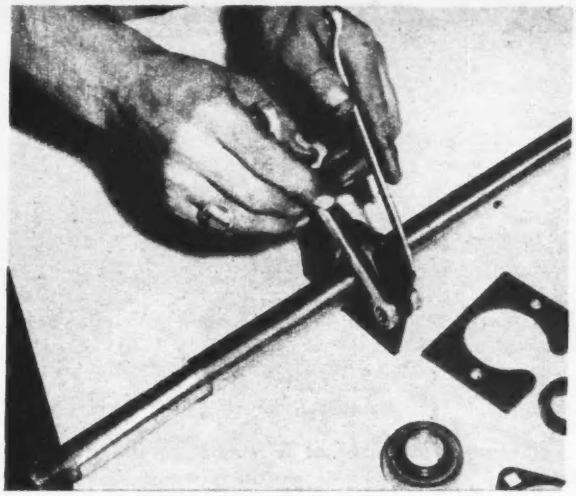
Comet Industries have available a complete live axle assembly ready to mount onto any kart. Unit comes complete with hubs, brake and sprockets, weighs only 17 pounds. Swiftly modernizes new kart, old kart or your own custom machine.

Deluxe live axle kit is available from Steen's Power Parts. Axle is of 1 inch chrome moly steel. ¾" ends take Hands wheels with 1" inner bore and keyway, ¾" bore in outer half of wheel. Axle mounts one piece bearing and hanger frames which may be bolted or welded to kart's frame. Has hydraulic spot or expanding brakes.

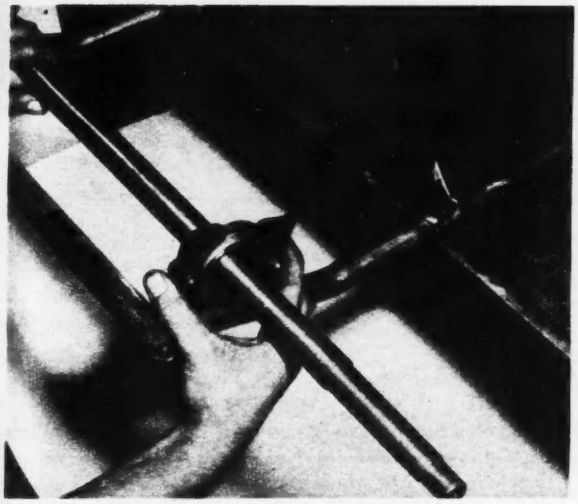




1. Initial step in changing dead axle kart over to a live axle is to cut off the existing axle stubs, leaving center.

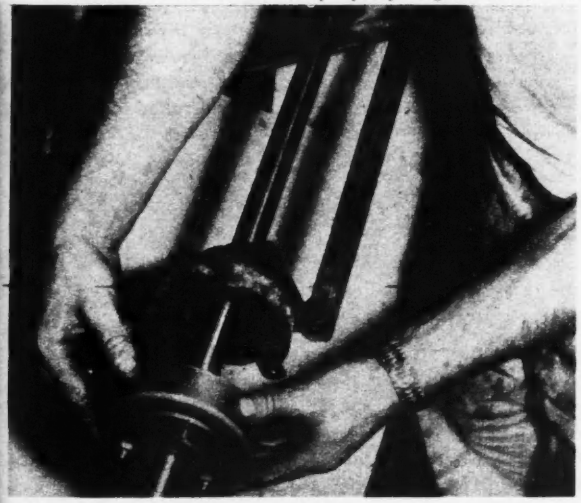


2. With most kits, assemble bearings and carriers, bolting them to the provided brackets. Install units onto live axle.

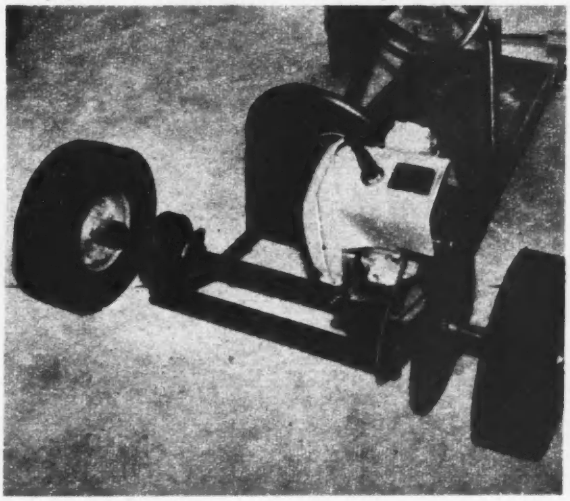


3. Find centers at rear frame members for new axle bearing carriers. Be careful that axle is properly aligned fore, aft.

4. After axle is in correct alignment, secure it with 'C' clamps, arc weld each side of mounting bracket to frame.



5. Next step is to install the brakes, sprockets, hubs and wheels. Open type axles are mounted above the frame rails.



6. Completed installation offers better traction, handling. Frame is now riding lower, has extra strength from new axle.

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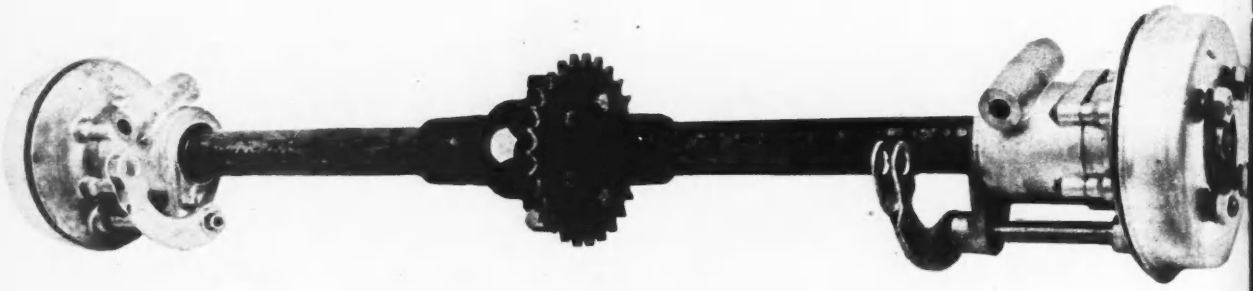
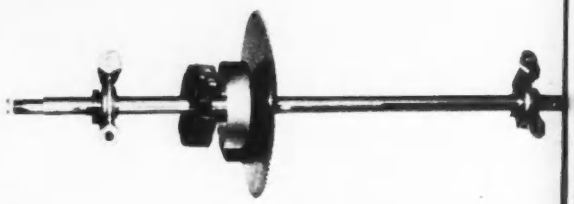
LIVE AXLE KITS

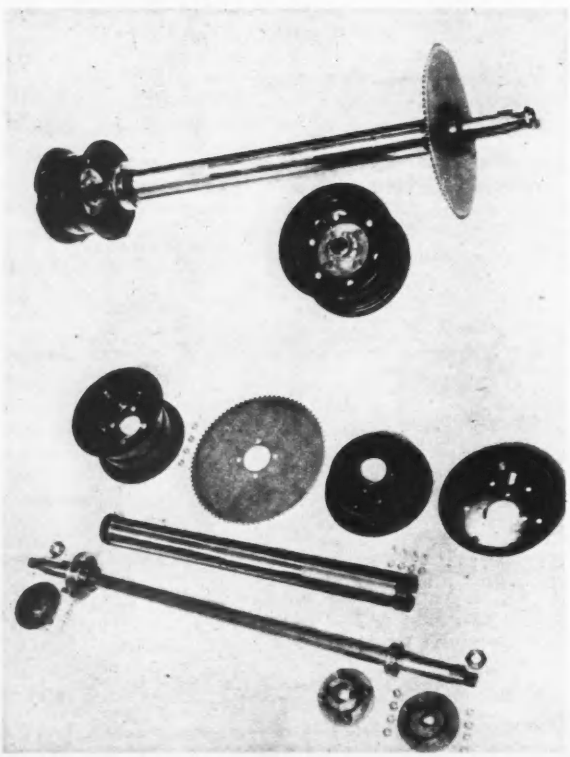


Differential live axle kit is another Steen's Power Parts offering. One inch axle rides on roller bearings, internal shaft in oil. Mounting flanges are aluminum, bolt to frame rails. Dual brakes are aluminum. Is similar to ring and pinion.

Left. Live rear axle assembly by Joy Car Mfg. Ltd., runs a chrome moly carrier tube enclosing the axle of like material. Adaptable to all karts, high speed bearings and hubs are featured. Unit insures ease of handing, no loss of power.

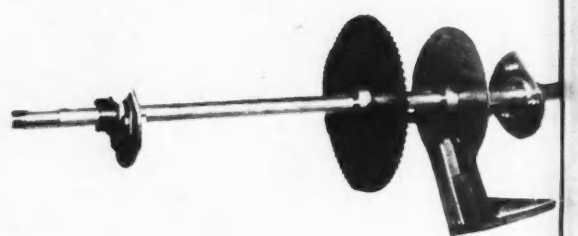
Right. Lightweight live axle kit is available from Steen's Power Parts, weighs only 16 lbs. One piece axle hangers may be bolted or welded to frame. Bearing inner journals are secured to axle, prevent turning against shaft, causing wear.



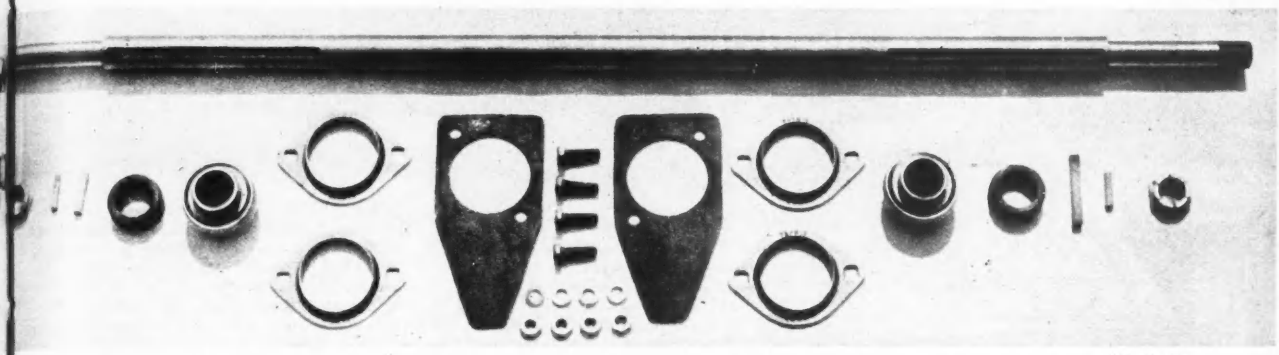


Assembled Bantam-live-locked axle is product of M. Mitchell Co. Optional lightweight steel wheels ride on tapered drive hubs allowing fast wheel changes. Outer tube is welded to kart frame, giving additional strength, replacing dead axle.

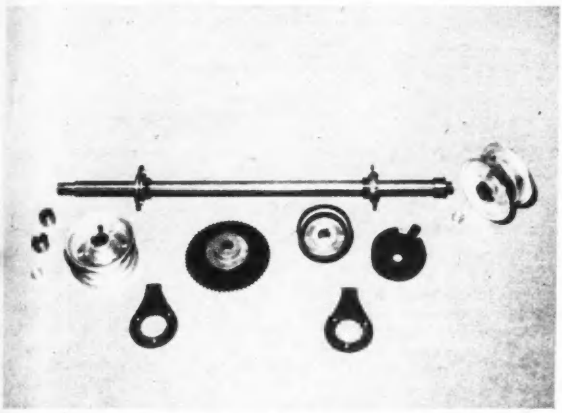
Lower left. Exploded view of Bantam Division, M. Mitchell Co. live axle kit shows axle, sealed outer tube, precision bearings, hubs, other parts offered. Design permits axle to drive either or both wheels. Sprockets bolted to keyed hubs.



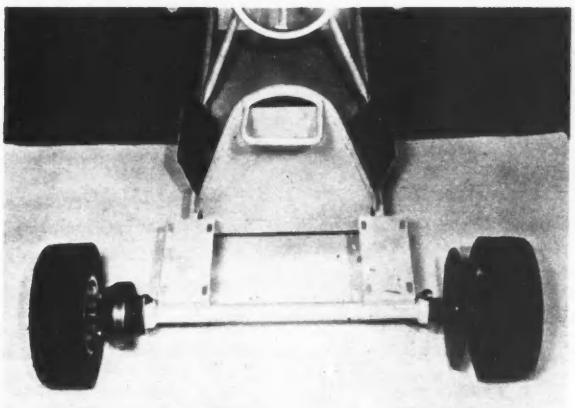
Above. Heavy duty mechanical spot brake is enough to stop any kart driven by this Go Kart Mfg. Co. live axle kit. A choice of three drive sprockets are available. Axle is stepped on ends from 1" to ⅞", bearing hangers must be welded.



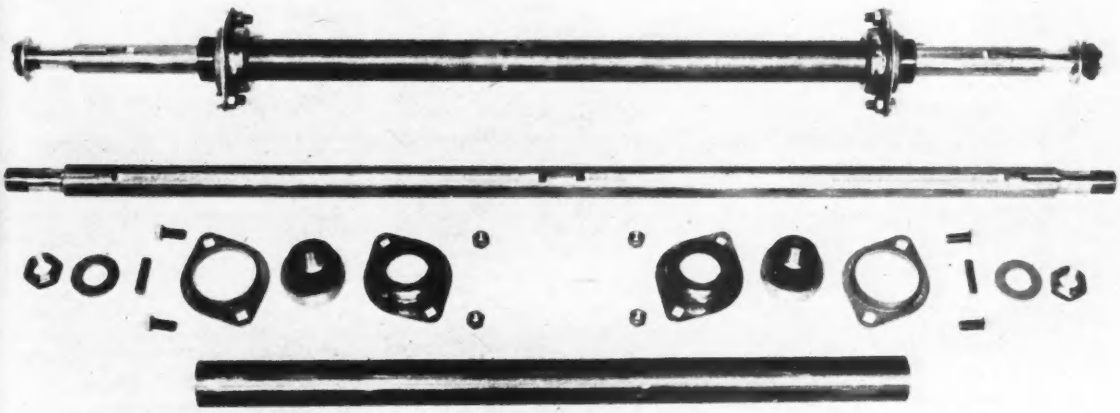
Semco Products offer this live axle complete with hangers, bearings, carriers, locking flanges and keys, hangers may be welded to any kart frame. Optional are bushings converting regular wheel hubs for use with live axle kit, cost extra.



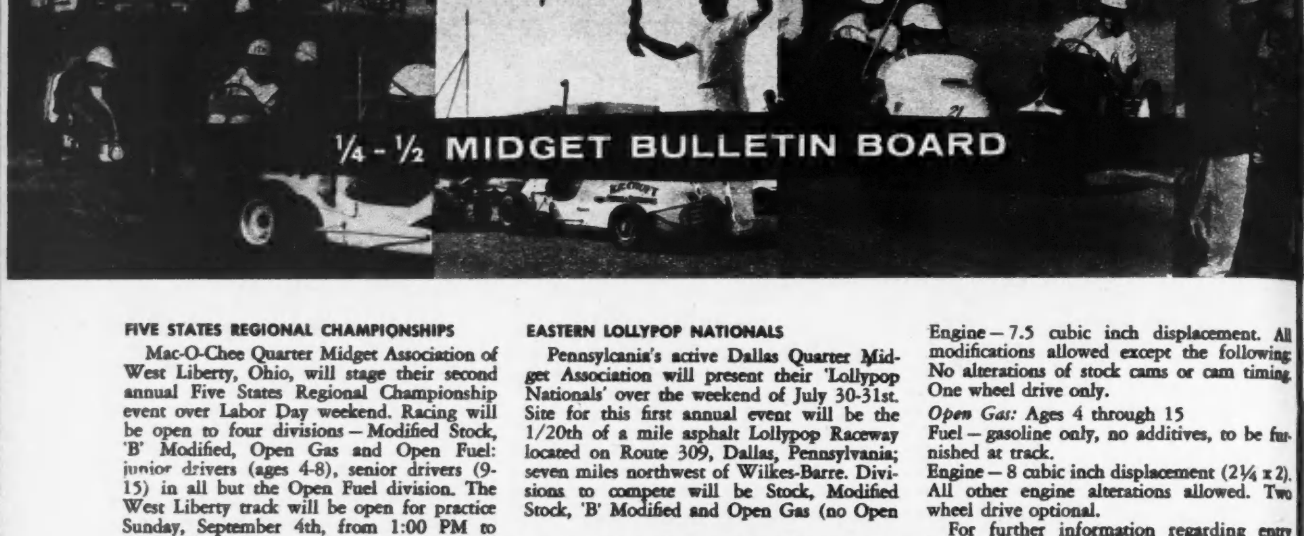
The Bill Matthews Co. has a one inch axle with self-aligning precision bearings enclosed in steel flanges. Hangers may be set to fit all frames. One, two sprockets, brakes available.



Installation of the enclosed live axle kit greatly strengthens the kart's chassis due to its size. Outer tube replaces old dead axle, houses solid live axle utilizing sealed bearings.



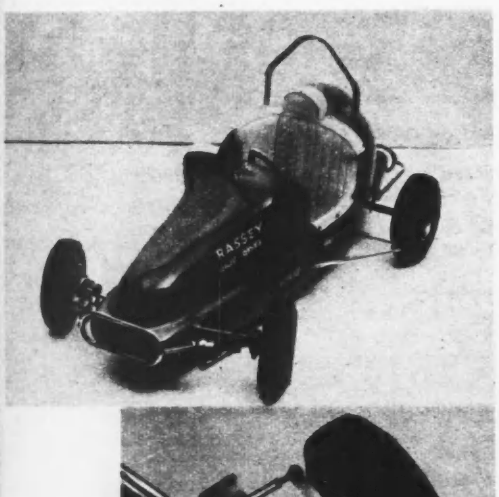
Reed Engineering employs their competition proven live axle and bearings used in the open type, in their new enclosed kit. Outer tube is 1 ⅜" o.d., replaces the dead axle. Measures 24" between bearing collars, can be shortened if desired.



¼ - ½ MIDGET BULLETIN BOARD

FIVE STATES REGIONAL CHAMPIONSHIPS

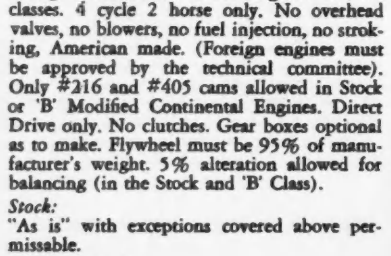
Mac-O-Chee Quarter Midget Association of West Liberty, Ohio, will stage their second annual Five States Regional Championship event over Labor Day weekend. Racing will be open to four divisions – Modified Stock, 'B' Modified, Open Gas and Open Fuel: junior drivers (ages 4-8), senior drivers (9-15) in all but the Open Fuel division. The West Liberty track will be open for practice Sunday, September 4th, from 1:00 PM to 5:00 PM. Qualifying will start promptly at 10:00 AM Monday, September 5th, with class racing commencing as soon as qualifying has been terminated. In addition to Sunday and Monday's championship racing program regular evening racing will still be held Saturday, September 3rd, for early arrivals and local contestants. Qualifying starts at 7:00 PM for the regular racing schedule. For information regarding rules and regulations and entry blanks concerning the Championship event for Sunday and Monday, write: Ralph West, Mac-O-Chee Quarter Midget Association, Westcraft Quarter Midgets, 406 Miami Street, Urbana, Ohio.



Trailing arm torsion bar front suspension, leaf-spring rear suspension, steel tubular chassis, bumpers and roll-bar are just a few refinements of the all-new 'Rassey Rocket' just announced by the Rassey Mfg. Co., of Detroit, Mich. Rack-pinion steering, spacious custom upholstered cockpit and knock-off caps are special features. Fiberglass body.

EASTERN LOLLYPOP NATIONALS

Pennsylcania's active Dallas Quarter Midget Association will present their 'Lollypop Nationals' over the weekend of July 30-31st. Site for this first annual event will be the 1/20th of a mile asphalt Lollypop Raceway located on Route 309, Dallas, Pennsylvania; seven miles northwest of Wilkes-Barre. Divisions to compete will be Stock, Modified Stock, 'B' Modified and Open Gas (no Open Fuel). Engine specifications and Junior and Senior divisions will be as follows for each racing classification. Basic engines for all classes. 4 cycle 2 horse only. No overhead valves, no blowers, no fuel injection, no stroking, American made. (Foreign engines must be approved by the technical committee). Only #216 and #405 cams allowed in Stock or 'B' Modified Continental Engines. Direct Drive only. No clutches. Gear boxes optional as to make. Flywheel must be 95% of manufacturer's weight. 5% alteration allowed for balancing (in the Stock and 'B' Class).



Eastern 'Lollypop Raceway' will be the scene of action as the first annual QM 'Lollypop Nationals' gets the starter's flag over the weekend of July 30-31st.

Stock:
"As is" with exceptions covered above permissable.

Modified Stock:
Jr. Division age 4 through 8 years
Sr. Division age 9 through 15 years

Fuel:
Gasoline only, supplied at track
Engine – cars shall have stock engines and all parts used shall be stock as listed for the series and model being used, except the following changes will be permited; 7.3 cubic inch displacement. Special oil dipper and special gas tank. Any type of carburetion. Removing of governor, muffler, flywheel screen and starter pulley. Advancing of stator plate and any type spark plug. Exhaust port can be bored to remove threads only, not to exceed .875 diameter. Porting and relieving not allowed. Valve guides and special spring keepers are permitted, as long as stock size valves are used. Battery ignition allowed. Any insert rod. Any type piston as long as it is flat head and does not increase compression. Stock heads and gaskets may be used and no alterations are allowed. One wheel drive only.

'B' Modified:
Jr. Division age 4 through 8 years
Sr. Division age 9 through 15 years
Fuel – gasoline only, no additives, to be furnished at track.
Engine – 7.5 cubic inch displacement. All modifications allowed except the following: No alterations of stock cams or cam timing. One wheel drive only.

Open Gas: Ages 4 through 15
Fuel – gasoline only, no additives, to be furnished at track.
Engine – 8 cubic inch displacement (2¼ x 2). All other engine alterations allowed. Two wheel drive optional.

For further information regarding entry blanks, accommodations or rules and regulations please write: 'Lollypop Nationals', Dallas Quarter Midget Association, Drad Kitchen, 6 Hillcrest Drive, Shavertown, Pennsylvania.

SAN JOSE INVITATIONAL NATIONALS

Three big days of racing has just been announced by the San Jose Quarter Midget Association over the forthcoming Labor Day weekend. The San Jose Invitational Nationals will get underway Friday, September 2nd, with practice the order of the day. Saturday, September 3rd, qualifying will begin for all classes commencing at 9:00 AM sharp continuing 'til 6:00 PM. Early Sunday morning will be devoted to late arrivals regarding qualifying up to 11:00 AM. Sunday afternoon's racing program will consist of all main events to be run first, then followed by the remainder of the semi and special events. The new national Quarter Midgets of America racing classes, rules and specifications governing cars and engines will prevail. September 2-3-4th are the big dates. For further information please write: San Jose Quarter Midget Association, 18816 McFarlan Dr., Saratoga, California.

QMA NEWSLETTER

— by John Dupree

Last month in the July issue of CAR CRAFT Magazine the newly formed Quarter Midgets of America introduced their new NATIONAL RULES and SPECIFICATIONS to the nation's quarter midget sport. There is no reason why I should expound on the 'why's' of these new regulations for I am sure that every quarter midget enthusiast realizes the imperative need for such a standardization program. The purpose of the new QMA car and engine specifications and classifications is not one of a dictatorial position but an aim that finds essence in standardization on invitational, regional and national event levels. It has never been our intentions to deter local association governing rules. – but it is our objective to establish a universal standard for invitational events whereby participants from all areas of the country may compete with a

personal guarantee that the racing program will function under one set of rules and regulations governing cars, engines, racing classifications, and junior and senior age divisions. The new QMA rules are a composite of general regulations many of which have been in order since the inception of the quarter midget sport. Except for a few new additions, the regulations parallel those that have been the *rule*. For most regional and national events the past few years. The new additions are those that were recommended and reviewed by some one-hundred and sixty-two quarter midget associations from coast to coast. It is very gratifying to know that a majority of these associations have already endorsed these new rules for present and future invitational meets, and have additionally accepted them for regular weekly or monthly racing dates. A copy of these new QMA Rules and Specifications will be mailed upon request.

• • •

One of the most favored aspects of the new QMA Rules and Specifications by all quarter midget associations was the introduction of the national "Box Stock" racing classification. Long overdue at all National events, a quarter midget enthusiast can now participate in this division sharing all the honors and enjoyment as any one of the other four racing divisions. The new division was established so as to afford many of the new quarter midget participants an equal right to championship prestige and participation. In the near future QMA looks for this racing division to become one of the most highly competitive and popular racing classification of its entire program.

• • •

At present QMA's administrative Board of Directors are preparing a Sanctioning Program to assist in alleviating the duplication and conflicting scheduling of invitational regional and national championship events. In the last two years associations the country over have unknowingly, and in some cases with complete disregard to others, scheduled large invitational events within the same area at the same time. This situation is becoming more and more critical and one that needs the attention and cooperating of every quarter midget association. The detrimental and confusing aspects of such a situation are obvious; both events are sure to suffer regarding participation support. There is no need for alarm when the two or three duplicating events are removed from one another in considerable traveling distances, but when they are staged within the same locale, or within fifty to one hundred mile radius, then participation is surely divided and each event will lack in otherwise unanimous support. Every association is inclined to take advantage of particular holiday weekends and vacation time. This is only a natural outlook. But cooperative scheduling and national sanctioning is imperative. QMA Sanctioning Program proposal will soon be announced.

• • •

By now many associations have received QMA's Safety Form. It is a questionnaire devoted to determining the legitimate safeguard of quarter midget racing. The information furnished by these questionnaires on the part of the association will be QMA's answer to many of the so-called *informed* national safety committees, state legislation agencies that have recently attempted proposing abolitionary measures to terminate quarter midget and all miniature motorized car activity. The data furnished QMA by these Safety Forms will be employed to counteract and educate these *misinformed* groups — and all other misled persons who aim adverse publicity at the sport of quarter midget activity. This will be the sport's first national step to unification and respectful self-preservation. — JOHN DUPREE

DETROIT DRAGWAY—SEPTEMBER 1, 2, 3, 4 & 5

6th annual
NATIONAL CHAMPIONSHIP DRAG RACES
5 DAYS AND THREE NIGHTS OF THE BEST IN DRAG RACING

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For information on entries, write to BIG GO or BIG SHOW c/o NHRA, 1171 North Vermont Ave., Los Angeles 29, Calif.

Entry deadline, both events, is August 1, 1960.

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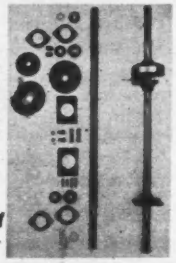

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WHAT'S YOUR PROBLEM?

By Don Francisco

YEAH, WHY NOT?

Dear Don:

Is this a suitable combination to install in a '36 Ford: A 1957 Chevrolet engine, 1939 Ford floor-shift box, and '40 Ford rear end.

What would I have to do about the clutch? What kind of tires would be best for a hot machine?

Any information on the installation of these parts will be greatly appreciated.

— John Witunski
Lisle, Illinois

Small Chevy V8's make nice installations in any early model Ford. They are light enough in weight that they don't louse up the car's handling or steering and everyone knows how they perform.

If you like a floor-shift transmission, the '39 is the best Ford box you can get. It isn't as husky as a Cad-LaSalle but the Chevy shouldn't be able to overload it at low car speeds. By the time the engine is turning enough rpm's to develop a respectable torque output everything in the driveline will be rotating fast enough to prevent the transmission's being damaged by pure torque.

A '40 Ford rear end wouldn't be much of an improvement over the '36, depending on the comparative condition of the units, and you might have trouble with driveshaft and torque tube length. The '40 had juice brakes originally, which would be a definite advantage over the '36 mechanical binders, but you didn't state which brakes you plan to use. Installation of hydraulic brakes would complicate the project but from the standpoint of safety they would be more than worth the effort and money involved.

For the clutch assembly, use a standard Ford 10-inch disc and a '49 or '50 Mercury Borg and Beck pressure plate assembly on a stock Chevy flywheel.

The type of tires you should use will depend on how you're going to drive the car. For city driving, you could use any tires that will fit the wheels. For combination city driving and fast highway use, any good brand of tire would be suitable, but it would be a good idea to avoid the cheaper grades. The cheaper tires might not be up to the stresses of fast highway driving. For drag racing, you could use regular tires on all four wheels, or possibly slicks on the rear wheels and standard tires on the front. Treads on slicks wouldn't have to be too wide to handle the Chevy's comparatively mild torque output at low crankshaft speeds.

GOOD IDEA, TO A POINT

Dear Don:

I recently acquired a '36 Plymouth coupe. Do you know where I can purchase an adaptor that will enable me to bolt a Chevy V8 engine to its transmission? Do you advise this match or should I get an engine with transmission to match and start from there? Also, would the car's stock rear end take the new conversion?

— Bob Ardire
Palisades Park, N.Y.

I don't know of any transmission housings designed to adapt engines other than Chrysler products to Chrysler product trasmissions. Nearly all of the commercially available transmission adaptors are designed for Ford product transmissions, a few Chevy transmissions, Cad-LaSalle boxes, and some Hydra-matics. But even if an adaptor housing were available for the installation, I wouldn't recommend bolting a '36 Plymouth transmission to a Chevy V8 engine. Your best move would be to use either a Chevy transmission or one of those for which an adaptor is available. These would include a Cad-LaSalle or any of several Ford product boxes.

The stock rear end assembly should handle the Chevy engine if it is in good condition. If it is worn out, you would be foolish to try to use it.

DROWNING IT WITH AIR

Dear Don:

I have a 1954 Ford on which I've installed a three-carburetor intake manifold and three 1956 Ford Holley Carburetors. The middle carburetor has 55 main jets and the end carburetors have 51's.

The engine runs and idles well until I open all three carburetors. Then it just spits and sputters and refuses to wind out, unless I back off. The engine will not take full throttle.

What can I do to remedy this condition?

— Patsy Adovasio
Bronx, New York

Three two-throat carburetors provide too much venturi area at low speeds for an engine that has a displacement as small as that in a '54 Ford. There's nothing new about this problem but it was solved several years ago when manufacturers of hot rod parts perfected progressive throttle linkage.

To solve your problem, I suggest you install progressive throttle linkage on your carburetors. Linkage of this type can be installed and adjusted in more than one way, but for your car I would adjust it so that it controls the throttle valves in the middle carburetor until the valves are approximately two-thirds open before it starts to open the valves in the end

CONTINUED ON PAGE 64

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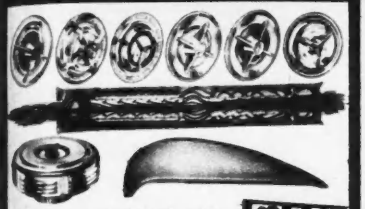

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NHRA NATIONAL DRAGS and SHOW

Four New Fords To Be Awarded At The National Championship 'Big Go' and 'Big Show'

AMERICA'S FASTEST hot rods—and most beautiful custom cars will set the scene comes Labor Day weekend when the National Hot Rod Association presents the 6th Annual NATIONAL CHAMPIONSHIP DRAG RACES—and the 2nd Annual NATIONAL CHAMPION CUSTOM CAR SHOW. The combination National DRAGS and SHOW events are expected to draw close to one thousand special-built custom and hot rod automotive entries from coast to coast. Detroit, Michigan, automotive capitol of the world will be the center of activity with the big 'BIG GO' drag racing action taking place on Detroit's famed 'Dragway' while the show-car's 'BIG SHOW' will be spotlighted on the show floor of Detroit's huge Artillery Armory.

Entries will compete for National Championship titles as well as sweepstakes awards that include four new 1960 Ford automobiles. Some forty competition classes wil make up the championship drag racing program with the 'Top Eliminator' of the event winning the D-A Lubricant sponsored Ford V8 Country Sedan. 'Middle Eliminator' winner will be the recipient of a brand new Ford Falcon Station Wagon while visitor in the 'Little Eliminator' division will receive a '60 Ford Falcon Ranchero.

'Grand Sweepstakes' champion of the 2nd annual National Champion Custom Car Show will drive home in true custom style with a bright fire-engine red 1960 Ford Sunliner convertible, stick-shift—with the big 360 Ford engine! In addition to the show's 'Grand Sweepstakes' award, sponsored by the AMT Corporation, some eighteen Championship Divisions for custom cars, hot rods and sports cars will be in contention as well as other special National awards for the 'Best Custom, Rod, Sports' classifications.

The 1960 'BIG GO' and 'BIG SHOW' Nationals presentation will be the largest, most exciting, active and rewarding five days of any competitive hot rod and custom car event ever staged. Labor Day weekend are the big dates—September 1-2-3-4-5. All entries close August 1st. Information regarding either of these two National Championship events should be directed to the National Hot Rod Association, 'BIG GO' or 'BIG SHOW', 1171 North Vermont Avenue, Los Angeles 29, California.

'Top Eliminator' — Ford Country Sedan

'Middle Eliminator' — Ford Falcon Wagon

'Little Eliminator' — Ford Falcon Ranchero

'Grand Sweepstakes-Show' — Ford Sunliner Convertible

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JET AGE STOPPING

This is one of the more popular release handles. It is a converted motorcycle control that simply requires a push down to pop chute; no fumbling.

to a similar "S" shape against the suspension lines, working the edges of the chute into the corners of the pack. A small flap, sewn to the bridal line (which connects the pilot chute to the main chute) is placed over the main chute. The compression spring in the pilot chute is positioned in the pack and the pilot chute compressed against the flap.

The pack is sealed for use by pulling a small loop, on the top of the pilot chute, through grommets on the four pack flaps. This is done as the flaps are folded over. A small length of cord is circled through the loop on the pilot chute and fed through the grommet on each flap in order (square flaps first, rounded flaps last). When the loop is pulled through the grommet the cable release wire is snapped to the outside flap and the inner release wire pushed through loop. This holds the pack closed, ready for instant use.

Each flap is fitted with a short length of elastic. The elastic is pulled toward the center of each flap and fastened to an eye hook on the flap. The tension of the elastic pulls each flap open when the release is pulled. These help the chute open faster.

At this writing Deist Drag Chutes and Safety Chute Company are the only firms merchandising complete chute packs for drag racing. Their units come with pack, chutes, release connections and mounts.

Deist is currently developing a new type of chute, a "ring slot" chute, smaller (14½ foot main chute) and which will be marketed soon.

The big difference between the current ribbon chute and the new ring-slot chute is in the construction. The ribbon chute is made of 1 inch ribbon of nylon sewn laterally around in the panel. The ring-slot chute is made of larger panels of nylon (from 9 to 15 inches wide).

San Francisco's Champion Speed Shop built a chute for their Gotelli-Champion Special. It worked so well they decided to offer it to the public. The chute can be purchased without pack or release. The Irving Chute Company, Glendale, it has been reported, offers custom made chutes on special order.

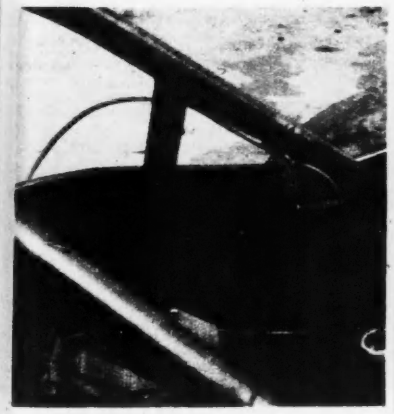
This is the lower loop chute suspension line seen in photo 3 of installation. It mounts thru loop on frame.

While the construction of a chute is not difficult, the knowledge of how a chute works is harder to come by. A chute has to be engineered to fit your car's design, speed, and weight. If it doesn't fit your car it may not work at all.

The size of the pilot chute, for example, regulates the speed with which the main chute opens. A small pilot chute pulls the main chute slowly. A big pilot chute pulls the main chute faster. The pilot chute has to be engineered to fit the weight of the main chute.

Design of the main chute is critical. It must be of ribbon or ring slot design, with air space between the individual ribbons or rings. The chute should allow about 24% of the air accumulated to pass through, providing the proper drag and giving you stable decelleration. A full canopy chute (solid chute) will not work. It will give too much initial shock and will be highly unstable.

If you are interested in speed coupled with sure, safe stops, if you want to save as much as 30% on tires and brakes, investigate chute brakes. Shortly after the Air Force began using chute brakes on their jet planes, they estimated that during the life of one chute, that chute saves $5000 to $8000 in brake and tire wear on the plane. No one claims that a drag chute will save $8000 for you, but a growing number of drivers will tell you they really pay their way.



This is the conventional "D" ring release. You have to hook fingers into ring and pull to pop the parachute.

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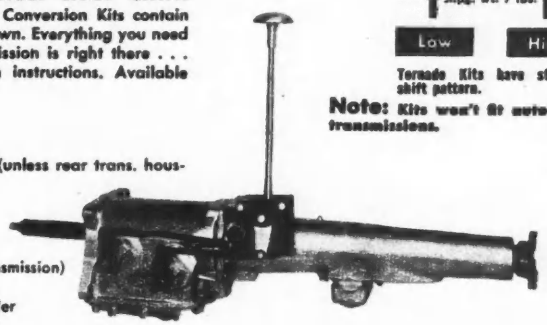
Note: Kits won't fit automatic transmissions.



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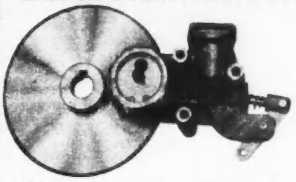

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P-14 AB Top Lever Model — designed for brake rod to pull from top . . low silhouette . . low center of gravity. $29.95 ea.

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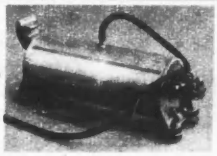

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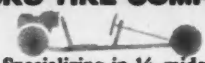

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CHARMING A CHEVY

Dear George:

I am the owner of a '51 Chevy and am thinking of fixing it up. I have three questions and they are: what kind of a steering wheel can I install? I want something modern. What skirts will fit my Chev? I am thinking of installing a '56 Chev V8. Will it work?

—Jim Bennett
Glen Allen, Va.

For a steering wheel, you need not look any further than the '58 Chevrolet Impala wheel. It is modern in design and will fit your shaft with no reworking required.

Skirts, if you want them, should be the '57 Merc type. They're the most popular right now and are probably the best for your car.

The V8 can and has been installed in your year Chevy. There is the usual amount of work involved that you would find in any engine swap. Unless you have plenty of experience, I wouldn't advise a do-it-yourself job.

BUDGET BUILT BEAUTY

Dear George:

We hope you will be able to give us some ideas on customizing a '54 Oldsmobile four-door sedan. We are on a limited budget. First, we need a grille. We have in mind a '53 Chevy grille with extra teeth, would it fit without much alteration?

Next, we need an idea for some taillights. We would like something different. Finally, we need a new rear bumper. Again we don't want to do much cutting or fitting.

If you have any other ideas we would like to hear them.

—Glen Rudd
Donald Rudd
Burlington, N.C.

Definitely use of the '53 Chevy grille. It can be made to fit and really looks nice. They're inexpensive to pick up, too. Taillights can be had by using plain red plastic lenses with white cross-bar designs (or maybe a bullet). They're bolt-in units and can be purchased at auto accessory houses or can be made cheaply from the basic materials.

Don't throw away your old Olds bumper. Keep it and install your exhaust tips through same. You should do this especially since you are budget minded. If it needs rechroming and straightening, take it to a chrome plating shop. They'll do both at a nominal charge. An added idea you can use is adding either the Impala top scoop or '51 Packard rear fender scoops (if you can find them) to your roof.

IMPALA WITH FURY LENSES

Dear George:

I've been working on a hot rod for some time now, and have purchased a '58 Chevy Impala as a tow car. The Chev is fine, but I do want to modify it slightly. I've done the usual lowering, dechroming and I've switched the grille with a tubular unit. As for the taillights, I want to install a set of '59 Plymouth Fury assemblies in the stock Chev position. Can this be done?

—David Gardner
San Antonio, Texas

I think the Fury taillights will be ideal for your Chev, particularly if you class the tow car as being a 'semi-custom'. This is a popular switchover for the Chevy, but many stray away from it as they feel it is too difficult. Contrary to this opinion, the Fury lights can be made to fit. It will take the usual amount of trimming and fitting to get the right mounting position, but when the lights are installed, the work and time which was involved will be worth the final appearance.

CHROME FOR WOOD

Dear George:

I am the owner of a '57 station wagon. The side trim is in plastic wood and it is cracking, chipping and peeling. What should I do? Should I remove this trim, fill the holes and use the stock chrome trim?

—Demosthenes Sandoval
Derby, Colorado

If this were my car, I would remove the trim and fill the holes. Then, rather than put stock trim on (because you have to go through the same process) I would install something different. Since you don't mention the make station wagon that you have, I can only make a guess, but I think that the '59 Dodge trim can be made to fit most any wagon.

COMMON FRENCHING QUESTION

Dear George:

Among the customizing chores I plan for my '52 Chevy are frenched headlights. What happens when you burn-out a lamp?

—Robert Harvey
Lancaster, Calif.

You change it! The seal beam is installed from the rear of the fender unlike conventional practice of mounting it from the front. The rim itself is what you french to the fender; you reverse the ring to enable a rear installation of the light. It makes it a little harder to change headlights, but the appearance of a frenched light is well worth it. And besides, how often do you change headlights anyway?

COMING EVENTS

SHOWS

Hartford, Conn. — Oct. 19-23, National Auto Review, State Armory, Matata's Speed and Custom Parts.
Lombard, Ill. — July 10 Torque-A-Rama Jewel Parking Lot. Torque-A-Teer Club.
Kansas City, Kansas — July 16, 17. Dragon Wheels 3rd Annual Rod & Custom Show Site, Brothers Chevrolet Co.
Topeka, Kan. — Oct. 1-2; 2nd Mid America Auto Spectacular, Municipal Aud.
Detroit, Mich. — Sept. 2-5. Nat'l Champion Car Show, Detroit Artillery Armory.
White Plains, N. Y. — Oct. 28, 30. Westchester Autorama. Westchester County Center.
Milwaukee, Wisc. — Oct. 29-30; 6th Rod-O-Rama. Milwaukee Aud., Artists and Mellotones Hot Rod Clubs.
Casper, Wyo. — Aug. 13-14; Industrial Bldg., Central Wyoming Fairgrounds, Kustoms Auto Club of Casper.

NHRA DRAG SCHEDULES

Coalburg, Ala. — 2nd Sun. Lassiter Mt. Drag Strip.
Dothan, Ala. — July 17; Aug. 28; Sept. 18. Napier Drag Strip.
Phoenix, Ariz. — 2nd and 4th Sun. Deer Valley Dragway.
Carlisle, Ark. — 2nd Sun. each month. Arkansas Timing Assn.
Little Rock, Ark. — 1st & 3rd Sun. Mid South Timing Assn.
Colton, Calif. — Every Sun. Colton Drag Strip.
Eureka, Calif. — 1st & 3rd Sun. Humboldt Timing Assn.
Holtville, Calif. — Reopen Sept. Imperial Valley Timing Assn.
Inyokern, Calif. — 2nd Sun. April. Each 3rd Sun. thereafter. Dust Devils Auto Club.
Madera, Calif. — 2nd Sun. Madera Clutchers, Inc.
Palmdale, Calif. — 4th Sun. Antelope Valley Timing Assn.
Redding, Calif. — 3rd Sun. each month. Shasta Roadsters.
San Luis Obispo, Calif. — 3rd Sun. San Luis Obispo Co. Timing Assn.
Santa Maria, Calif. — 1st Sun. Dragons, Inc.
Taft, Calif. — 3rd Sun. Taft Dragsters.
Visalia, Calif. — 4th Sun. Vapor Trailers.
Grand Junction, Colo. — Every other Sun. Grand Junction Hot Rod Council.
East Haddam, Conn. — Open every Sun. Connecticut Dragway; Nutmeg State Timing Assn.
Davis, Fla. — 2nd & 4th Sun. Broward Auto Club.
Green Cove Springs, Fla. — Every Sun. Thunderbolt Inc.
Kissimmee, Fla. — 1st Sun. Central Florida Timing Assn.
Venice, Fla. — 1st Sun. Vagabonds, Inc.
Augusta, Ga. — Every Sunday. Augusta International Speedway.
Covington, Ga. — 4th Sun. Newton County Drag strip.
Sterling Rock Falls, Ill. — Every Sun. '88' Dragway.
Mansfield, La. — 3rd Sun. each month. Ark.-La.-Tex. Timing Assn.
Opelousas, La. — 2nd Sun. each month. Pel-State Drag Strip.
Sanford, Maine — every other Sun. New England Hot Rod Council.
Orange, Mass. — 3rd Sun. each month. New England Hot Timing Assn.
Detroit, Mich. — every Sun. Detroit Dragway.
Minneapolis, Minn. — Every Sun. Twin Cities Optimists Clubs Timing Assn.
Belgrade, Mont. — 2nd Sun. each month. Bozeman, Pacers.
Scottsbluff, Neb. — July 10, Sept. 18. Nile Valley Timing Assn.
Henderson, Nev. — 2nd & 4th Sun. Industrial City Timing Assn.
Atco, New Jersey — Every Sunday, Every Wed. night. South Jersey Timing Assn.
Vineland, New Jersey — Every Sat. nite thru Sept. 17. Vineland Speedway.
Hobbs, N. M. — 1st Sun. Charioteers Auto Club.
Roswell, N. M. — 3rd Sun. Dusters Auto Club, Walker Air Force Base.
Cincinnati, Ohio — Every Sun. Beechmont, Dragway.
Dayton, Ohio — 1st & 3rd Sun. Dahio Drag Strip. Mont. Co. Timing Assn.
Toledo, Ohio — Every other Sun. Glass City Dragway.
Durant, Okla. — 4th Sun. Durant Timing Assn. Eaker Field.
Oklahoma City, Okla. — Open every Sun. Oklahoma City Drag Strip.
Tulsa, Okla. — Every other Sun. T. T. A.
The Dalles, Ore. — July 17, Aug. 14, Sept. 11. Dallas Airport-MCTA
McMinnville, Ore. — 7-17, 8-14. Columbia Timing Assn.

NHRA CHAMPIONSHIP

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Cedde Mills, Texas — Aug. 6 & 7
Ft. Worth, Texas — July 23 & 24

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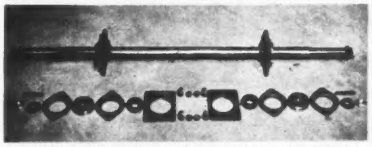

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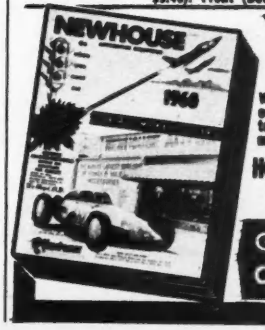

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IT'S IN THE INSTRUCTIONS

Dear Don:

I own a 1950 Ford that has a V8 engine and an overdrive transmission. I would like to adapt a Chevy V8 engine to my car's gearbox.

I know I'll need an adaptor housing, a '49 or '50 Mercury Borg and Beck pressure plate, and a Ford clutch disk that will fit the clutch shaft on my transmission. What I would like to know is what throwout bearing arm and bearing will I use? Also, what size pressure plate and clutch disc do I use, a 9¾ or 10-inch?

— Randall Vass
Ida Grove, Iowa

Actually, you don't have any problem because the information you request will be included with the transmission adaptor you will need for the installation. These adaptors consist of a flat steel or aluminum plate that bolts to the rear of the Chevy cylinder block. A stock Ford flywheel housing, which may be different than the one now on your transmission, is used between the adaptor plate and the transmission. If your flywheel housing is not the correct one, the one you need can be purchased from the parts department of practically any Ford agency.

You can bolt a '49 or '50 Mercury Borg and Beck pressure plate assembly to the flywheel without making alterations to either the pressure plate assembly or the flywheel. These assemblies have a 10-inch pressure plate. A 10-inch driven disc should be used with them.

Using a Ford flywheel housing makes it necessary to use a Ford throwout arm and bearing assembly.

EASY TO FIGURE

Dear Don:

My car has a 4.86 rear axle ratio and a three-speed plus overdrive transmission. With transmission gear ratios of 2.49 to 1 in low, 1.59 to 1 in second, 1.00 to 1 in high, and .781 to 1 in overdrive, what are my final ratios in each of the gears?

How do these ratios compare with those I would have with a Chevy four-speed box and a 3.56 to 1 rear axle ratio?

— A. W. Lacy
Franklin, La.

Final ratios for any combination of transmission and rear axle ratios are easily computed by multiplying the two ratios together.

For the 4.86 rear axle and three-speed transmission, the final ratios would be 12.10 in low, 7.72 in second, 4.86 in high, and 3.79 in overdrive. I don't know what kind of an overdrive you have but most of these with which I am familiar have a ratio of .72 instead of .78. The final ratio with a .72 overdrive would be 3.50 to 1.

Final ratios with the 3.56 rear axle and a Chevy four-speed box would be 7.83 in low, 5.91 in second, 4.66 in third, and 3.56 in high.

FROM SICK TO SICKER

Dear Don:

I recently bought a 1953 Packard Clipper that is immaculate but, of course, it's an oil burner. I would like to have your opinion as to what would be a good engine to install in the car in place of the straight 8. The car has an automatic transmission and power steering and brakes and I love the ride.

Could I possibly use a 1949 Merc V8 with my transmission? I have a good one.

I have a metal lathe and I know about steel and heat treating. I can have parts made if they are not too complicated.

My object is not speed; I would like a good, quiet performing, reliable rig. I would like to go easy on the finances.

—Roland Provost
Attlebore, Mass.

As the monkey said to the elephant, nothing is impossible. A '49 Merc engine would probably fit in the Clipper engine compartment without too much trouble, although you undoubtedly would have a difficult problem connecting it to the Packard transmission. But after the job was finished, I'm afraid you'd find the car a miserable beast to drive.

In their stock form Clippers weigh approximately 3700 pounds. Swapping the engines would probably drop your car's weight a hundred pounds or so but the car would still be heavy for such a small, obsolete engine.

The only engine swap I would recommend for your car would be a late model overhead valve V8 with a modern automatic transmission of some kind behind it. Such a swap would give you the performance you need for safe driving and the added benefit of dependability and long life. Flathead Merc engines weren't known for long life, and working one of them harder than normal by tying it to a heavy chassis would shorten its life just that much more.

Dear Don:

I own a '50 Olds hardtop. The stock mill in the car is getting pretty tired and I want to make an engine swap that will give me plenty of go but few problems. I want to run some kind of stick-shift box. Could you possibly give me some information on the mill that would be best for my car?

I've heard that some fellows are installing Chevy's in '50 Olds bodies. Should I go Chevy or Olds?

I would really appreciate some information because, believe me, I am stuck.

—Hobart Pihl
Los Altos, Calif.

I'm all for engine swaps—the best car I ever owned is a '50 Ford that has a '52 Chrysler V8 engine and a '53 Olds Hydra-matic trans—when they add up to an improvement over original equipment, but this here Hobart, now, just doesn't seem to have the idea of the thing in proper focus. While other guys are shattering their bank accounts to drop an Olds in their cars, he's thinking of putting a Chevy in his Olds. I think this is a step to the rear rather than forward.

Two essential bits of information that might make Hobart's line of reasoning a little more clear were not included in his letter. One of these has to do with the original engine in his car. In 1950, Oldsmobile made a six-cylinder engine as well as their more popular V8. It's possible that the engine in Hobart's car is a six. If so, a Chevy engine, as long as it was a V8, would be a definite improvement. The other missing bit of information would have told us whether the Chevy he has in mind is a 265, 283, or 348 cubic inch model.

At first glance the idea of a Chevy V8 in a '50 Olds doesn't make sense, because Oldsmobiles are generally considered to be pretty heavy cars. However, after comparing their weights with those of 1960 Chevys, I find the Olds to be the lighter of the two. Not much lighter, but some.

But to get back to practical things, Hobart, I think an Olds engine would still be best for your '50 Olds chassis. Probably the best thing to do would be to swap the original engine for the latest model Olds you can afford and drop it into the chassis. This way you wouldn't have any installation problems. Late Olds engines have a very definite advantage over Chevy V8's in that they have a greater displacement. This additional displacement is invaluable for low-speed performance.

A stick-shift box runs a very poor second to a good Hydra-matic for either normal driving or mild competition, but if a guy couldn't get along without one of them he could use either a standard Olds trans or a Cad-LaSalle. Neither of these installations would present difficult problems other than installing a clutch pedal and linkage if the car originally had a Hydro.

And then there is the other alternative of taking the '50 Olds and the money that would be required to change its engine and transmission and laying them on the line for a late model Chevy, ready to run.

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CUSTOM MODEL AT AN HONEST PRICE

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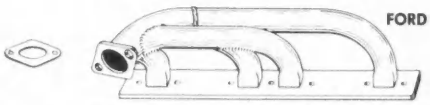
IN PROFESSIONAL "COPPER-TONE" PLATED FINISH



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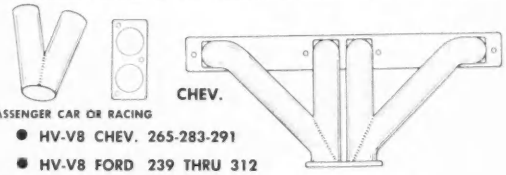

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PASSENGER CAR OR RACING

- HV-V8 CHEV. 265-283-291
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UNIVERSAL USE IN ANY FRAME OR BODY

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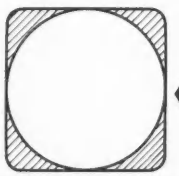
Guaranteed to give more horse power than any round port or stock headers - OR MONEY REFUNDED -



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SQUARE FORMED TUBING MATCHES THE PORTS

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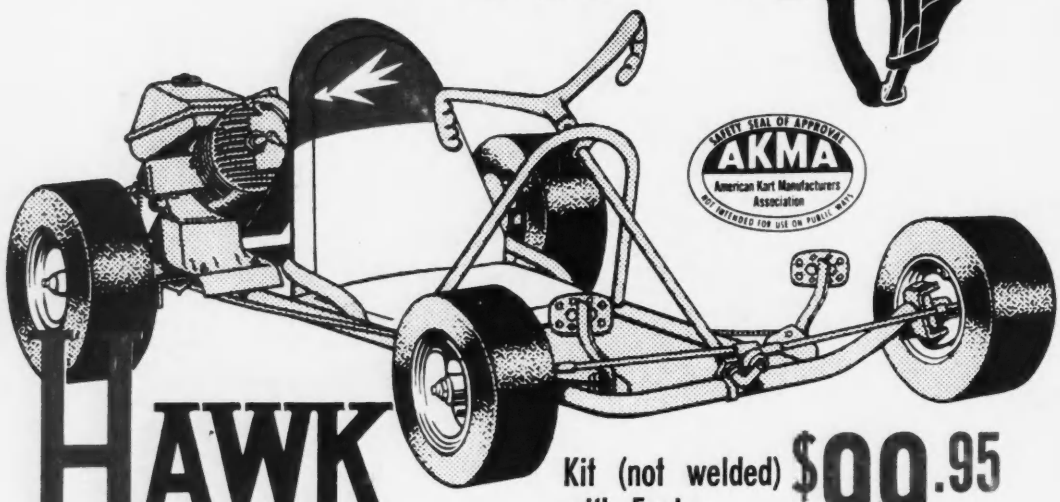

HAWK

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Kit (not welded) with Engine . . . **$99.95**

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THIS IMPORTED HELMET of rugged fiberglass-reinforced polyester construction with thick foam rubber padding, adjustable leather chin strap and detachable zipper ear flaps would ordinarily retail for as much as $25! And it's yours—absolutely free—with the purchase of a HAWK kart, either the kit at $99.95 or the completed kart at $139.95 ($119.95 less engine), if you order directly from this advertisement!

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